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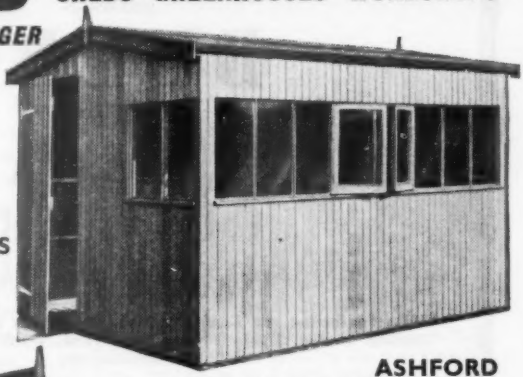

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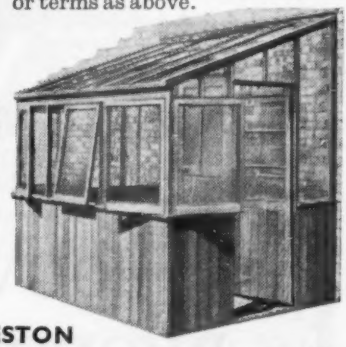

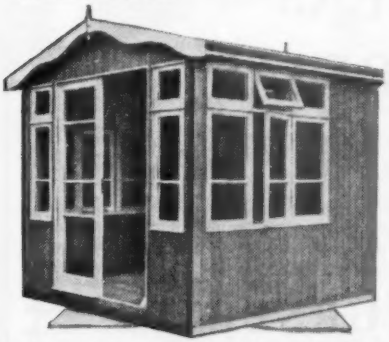

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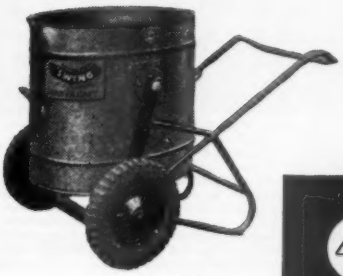

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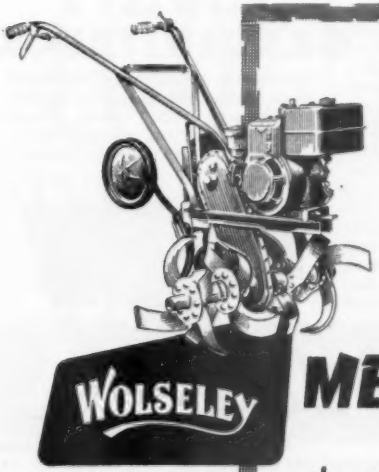

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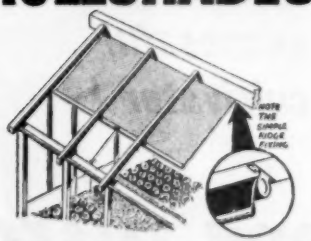

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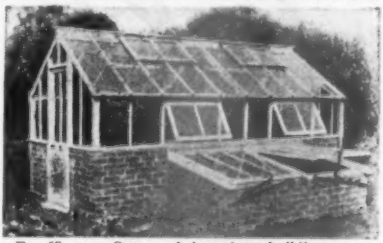

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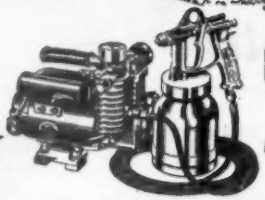

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JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY

VOL. LXXXV PART EIGHT

August 1960

THE SECRETARY'S PAGE

ANNOUNCEMENTS—AUGUST AND SEPTEMBER

Shows

TUESDAY, August 9, 12 NOON to 6 P.M. WEDNESDAY, August 10, 10 A.M. to 5 P.M.	Fortnightly Flower Show, in the New Hall. Gladiolus Competition and British Fuchsia Society's Competition, in the Old Hall.
FRIDAY, August 12, 12 NOON to 6 P.M. SATURDAY, August 13, 10 A.M. to 5 P.M.	British Gladiolus Society's Show, in the Old Hall.
TUESDAY, August 30, 12 NOON to 6 P.M. WEDNESDAY, August 31, 10 A.M. to 5 P.M.	Fortnightly Flower Show, in the New Hall.
TUESDAY, September 6, 1 P.M. to 7.30 P.M. WEDNESDAY, September 7, 10 A.M. to 5 P.M.	National Dahlia Society's Show, in both Halls.
FRIDAY, September 9, 11 A.M. to 7 P.M. SATURDAY, September 10, 10 A.M. to 5 P.M.	National Rose Society's Show (both Halls on September 9, New Hall only on September 10).

Shows—*continued*

TUESDAY, September 13, 12 NOON to 6 P.M. WEDNESDAY, September 14, 10 A.M. to 5 P.M.	Fortnightly Flower Show, Summer Tree and Shrub Competition, Alpine Garden Society's Competition and Cactus and Succulent Society's Competition, in the New Hall.
FRIDAY, September 16, 1 P.M. to 7.30 P.M. SATURDAY, September 17, 10 A.M. to 6 P.M.	National Chrysanthemum Society's Show, in both Halls.
TUESDAY, September 27, 12 NOON to 7 P.M. WEDNESDAY, September 28, 10 A.M. to 7 P.M. THURSDAY, September 29, 10 A.M. to 5 P.M.	**Great Autumn Show,** in both Halls.

Lectures

TUESDAY, August 9, at 3 P.M. "Annuals and Biennials for the Small Garden", by MR. R. J. HUNTLEY.

TUESDAY, August 30, at 3 P.M. "A Plant Hunting Expedition to the Mountains of Persia", by MR. P. M. SYNGE, M.A., F.L.S.

TUESDAY, September 13, at 3 P.M. "Late-flowering Trees and Shrubs", by MR. H. G. HILLIER, F.L.S., V.M.H.

TUESDAY, September 27, at 3 P.M. "Dahlias and their Cultivation", by MR. STUART OGG.

Demonstration at Wisley—On Wednesday, September 21, there will be a demonstration at Wisley on Digging, Manuring and Composting, commencing at 2 P.M. The demonstration will be repeated at the same time on Thursday, September 22.

Lily Group—There will be a co-operative display of later-flowering lilies at the Fortnightly Show on August 9 and 10. Members of the Lily Group are invited to bring or send lilies for it. SIR FREDERICK STERN, the Chairman of the Group, has kindly undertaken to supervise the staging of the display. Any member who would like to supply flowers for this exhibit is asked to let the Secretary of the Lily Committee know, on or before the preceding Wednesday, the names of the lilies he proposes to supply and the number of stems, so that the necessary arrangements in regard to space, etc., may be made and cards prepared showing the names of the lilies and the names of the exhibitors.

A Discussion on "Lilies in the Co-operative Display" will take place at 4.30 P.M. on Tuesday, August 9, in the Lecture Room in the New Hall.

Conifer Competition—As in most places Conifers are carrying an unusually good crop of cones it has been decided to have a series of competitive classes for Conifers in fruit at the Fortnightly Show on October 11 and 12, on which occasion there will also be competitive classes for trees and shrubs with ornamental fruits or coloured foliage. Schedules may be obtained from the Secretary.

Chelsea Show, 1961—It may be helpful for Fellows to know that in 1961 the Chelsea Show will be held on May 17, 18 and 19. The Private View for Fellows and Associates will be on May 16.

The Society's Examinations

General Examination Results 1960—At the General Examination in Horticulture, held on March 16, 1960, there were eight hundred and five candidates, of whom four hundred and fifty-four were successful—fifty-nine being placed in Division I and three hundred and ninety-five in Division II. Three hundred and fifty-one candidates failed to satisfy the Examiners. The Examination consisted of written work only.

The Preliminary Examination for the National Diploma in Horticulture will be held on Saturday, November 19, 1960. The closing date for entry is October 1, 1960.

NOTES FROM WISLEY

N. K. Gould

DURING the present month some of the most interesting features of the Gardens will be the Floral Trials, the herbaceous borders, the terrace bedding and the late-flowering heaths in Seven Acres.

Among the Floral Trials one which is a little out of the ordinary is a trial of varieties of lavender which comprises sixteen different stocks. It will be of considerable assistance in settling the correct nomenclature of some of the dwarf and dark-coloured varieties which have become so very popular in recent years. This trial is planted at the top of Weather Hill, close to the Model Fruit Gardens. Another trial which is the first of its kind for many years covers the varieties of zonal pelargonium, popularly called geranium, suitable for summer bedding. There are fifty-eight entries, and this should prove a very instructive trial as the value of a variety for bedding is so dependent upon the habit of growth, freedom of flowering and colour of foliage.

The annual varieties of alyssum have become sufficiently numerous to warrant a trial and should be in full flower now from seeds sown under glass in April and planted out in early June. Most of them are white or more or less violet-coloured and there may be some interesting novelties.

Of more general interest perhaps is the collection of thirty-eight stocks of *Phlox drummondii*. If raised under glass, pricked out early, hardened off and put out before the seedlings have a chance to become weak and spindly, they develop into fine, bushy plants continuing to flower for a very long season, and in a summer of favourable sunny weather are among the most valuable bedding annuals. They display some variation in habit of growth and also in the form of the flower, some people finding the fringed varieties particularly attractive.

In the trial ground on Weather Hill there is a collection of about seventy varieties of hemerocallis including some of the richly coloured American varieties which unfortunately are not yet obtainable in this country. There are, of course, many good ones which can be got at reasonable prices and in the judgment of some gardeners there are certain species which still rank among the best as garden plants. These are the old-fashioned day-lilies, which thrive in any soil without special care and seem to be immune from any disease or pest. Those who are interested in doing a little plant breeding in their own gardens will find that crosses are easily made between different species or varieties and some very pleasing hybrids can be raised without trouble. Finally, there is a trial of nearly sixty kinds of perennial phlox. These have been propagated recently from root cuttings, recognized as the best way of obtaining new plants free from eelworm. They will not reach their highest development this year although one may expect that there will be a good show of blossom.

The heather garden in Seven Acres which is full of flowers during the early spring until May, then becomes a little dull and green for a period, but in late summer there is another great burst of flowering when not only the later ericas but also the many varieties of calluna or ling begin to open their flowers. One of the most important groups consists of the varieties of *Erica cinerea*, of which the typical example is the purple Bell Heather so common in many parts of England and Scotland, and coming a little in advance of the ling. Many sports have occurred in the wild state and some of the best varieties in cultivation arose in this way. There are not only purple, red, pink and white flowered varieties but there is a good deal of variation in the colour of the foliage as, for example, in the varieties called 'Golden Drop.' and 'Golden Hue'. A good selection is to be found at Wisley where they grow intermixed with varieties of *E. tetralix*, the Cross-leaved Heath, and *E. vagans*, the Cornish Heath, and certain hybrids such as *E. mackaii*. The natural hybrids have been of interest both to botanists and gardeners for a very long time and some readers may be interested to know that the name of × *Ericalluna bealeana* has been published by Herr Krüssmann of Dortmund in the June issue of *Deutsche Baumschule* as a grex name for the hybrids believed to have arisen between *Erica cinerea* and *Calluna vulgaris*. Three of these, namely, 'W. G. Notley', 'Winifred Whitley' and 'Schizopetala' have at various times been mentioned in horticultural publications, including catalogues, but do not seem to have received proper publication with full descriptions until now. The plants themselves are perhaps of more botanical than

horticultural interest and have much the habit of the Bell Heather, differing in having a four-parted corolla instead of the usual bell.

Visitors may like to know where they can see a few summer-flowering plants of particular interest. On the south side of the frameyard wall several good varieties of ceanothus can be seen now. *C. burkwoodii* is among the most reliable and has blue flowers of a medium shade for a long season, *C.* 'Henri Desfosse' belongs to the group including the more familiar 'Gloire de Versailles', which are best if pruned back fairly severely in the spring when growth is recommencing. It has very large sprays of dark, violet-blue flowers. *C. pallidus* is a copiously branched species with rather small and pale leaves and its flowers are of a very light tint of blue, but it is by no means to be despised as it grows very rapidly and will continue to bloom for many weeks from June onwards. Against the same wall there are the rather tender *Salvia grahamii* and *S. neurepia*, both most useful for a warm and dry border such as this where in a favourable season they will flower all through the autumn.

The half-hardy house almost always has something of interest to offer and at the present time there is *Mutisia oligodon*, which is a climbing Composite with attractive, grey leaves and clear pink daisy heads several inches across. *Jasminum angulare* has dark, glossy foliage and small panicles of long-tubed, sweet-scented blossoms. *Crinodonna corsii* is the hybrid between crinum and amaryllis, and at this season it begins to send up a long succession of stout stems crowned by heads of large, pink, lily-like flowers. It differs from the Cape Belladonna in its evergreen foliage and narrower flowers.

A few of the most striking shrubs now are the Spanish Broom, *Spartium junceum*, of which there are specimens in the A.G.M. collection in Seven Acres and elsewhere still covered with sprays of golden-yellow flowers. *Aesculus parviflora* is a shrub rather than a tree, although it is closely related to the horse-chestnut. In Seven Acres and the Pinetum it can be seen as a large, rounded bush with graceful divided leaves and very slender, erect spikes of creamy-white flowers. Later on the leaves assume shades of yellow and gold before dropping. The viburnums are among the first of the shrubs to colour their berries and close by the A.G.M. collection will be found a number of different species of this varied genus in which the fruits are already very conspicuous.

THE GARDENS OF THE NATIONAL TRUST

Graham S. Thomas

(*Gardens Adviser to the National Trust*)

THE aim of the National Trust is to preserve places of natural beauty or historic interest for the enjoyment of the nation. It seeks to manage each property as well as it can, having regard to the special circumstances relating to each. It is dependent for its existence on funds which accrue from original endowments, annual subscriptions, together with legacies and donations. It is thus a body which operates in a private way and is not "national" in the sense which that word has come to convey of late years.

Gardens are one of the greatest glories of England, and as such are well worthy of preservation. A number of famous gardens, such as Blickling and Cotehele, came to the Trust as adjuncts to famous country houses. In 1949 the Gardens Scheme was started in conjunction with The Royal Horticultural Society to preserve some of the famous gardens of the country regardless of whether they were attached to important houses. The first of these was Hidcote, followed by Bodnant and Nymans. Gardens as a whole are more prone to decay and deterioration than other works of man's hands and are difficult to preserve without the personal touch of the creator. They mirror the trend of art and economy obtaining at the time of their creation, and into the word preservation, when it is applied to gardens, may be read the gradual development, including the replanting or reorganization which may be necessary from time to time.

The care of such gardens is an exacting task with many problems, and I have no doubt that the Trust finds the same problems as are found in the dozens of fine places throughout the country which are being opened to the public. For this reason I think that it may be of interest to outline the Trust's work in preserving its famous gardens and to record a small portion of its endeavour to develop them. I use the word "develop" rather hesitantly: I want to convey the feeling that its gardens are not just being preserved or maintained, but are being nursed and cared for, nourished in all ways, a gradual development of husbandry and art wedded together.

When opening a garden to the public, among the points to be considered are the siting of the entrance—not always, unfortunately, by the front gate—the provision of shelter for the ticket seller if he is not actually in the house; provision of seats, refreshments and literature. At Stourhead, so great is the number of visitors that a special pavilion had to be built to provide space for the attendant and his wares. The privacy of the family living in the house has also to be considered, and

at Nymans this has meant shutting off the little forecourt, while at Hidcote there was nothing for it but to keep the cedar lawn private for the use of the tenants. Many great gardens were not designed to accommodate more than a handful of visitors at one time; especially is this true of the plantsmen's gardens of the last half-century. Hence there may be grass paths which will not thrive under countless feet; gravel or paved paths which are too narrow; and gateways within the garden which each create a bottleneck and annoyance. In addition there is the sometimes very difficult problem of finding an area suitable for a car park, both with regard to its terrain and also its siting from an aesthetic point of view. In general the Trust has been successful in keeping the "display" of cars away from their important entrances and views, which is no doubt greatly appreciated by those who think of these things, and especially by photographers.

The financial side is not limited to the paying of gardeners' wages and general garden upkeep. Even in those few instances where a property has been taken with the garden as its main asset expenditure may be necessary on such things as the modernization of "tied" cottages; the upkeep of drives, bridges, fencing and farm buildings. There is also the general husbandry of each entire estate to be managed, including perhaps acres of woodland accepted more for the benefit of their amenity than as potential financial assets.

Gardens are undoubtedly costly in upkeep, but it is not always true that the largest gardens need the most gardeners. Except for very popular gardens like Bodnant and Stourhead (where the visitors totalled 43,535 and 63,767 respectively in 1959) the gate takings contribute in only a small way; many tickets have to be sold at, say *2s.*, to make up for the wages of one man. Wages and other costs continue to rise, whatever may be the income from the original endowment. Fortunately the Trust has the help given to it annually by the Queen's Institute of District Nursing under the Gardens Scheme, which goes to swell the Trust's Garden Fund raised originally by public appeal in 1949. Without this it would go hard indeed with certain gardens.

UPKEEP AND DEVELOPMENT

In tending its gardens the Trust has to consider them horticulturally and historically. Gardens may grow up with the house over hundreds of years as at Stourhead and Montacute or they may be of comparatively recent creation as at Hidcote. It has delighted me to find that, out of about three dozen important gardens under its care only two bear really any resemblance to each other, Stourhead and Sheffield Park. Every possible phase and style of gardening is represented. It is the Trust's policy to foster the particular style of each garden, and, if alterations or modifications have to be made in the interest of economy, to ensure that the style is carried on. And where a garden is noted for a particularly fine specimen of tree or shrub the Trust likes to ensure that the succession is continued. Two trees that come to mind are the Oriental plane

at Blickling and the white willow at Batemans; both are being propagated to ensure continuity. It is worth recalling that the most important and long-lasting features in most gardens such as the buildings, terraces and lakes were made long years ago, before the great plantsmen-gardeners of the last hundred years tended to concentrate their energies on collecting shrubs, trees and plants. Architectural features are normally easy to maintain but collections of trees and shrubs are almost always overcrowded and need combing out. Where gardens are on lime-free soil conducive to the growth of rhododendrons, often the owner would plant them to the exclusion of other forms of woody plants, with the assurance of a splendid display during early summer and to the inevitable exclusion of colour later.

From the point of view of the public this is very unfortunate, as the main bulk of visitors is during July, August and early September. The problem of providing colour during late summer has occurred over and over again. Instances of this are at Bodnant, Nymans, Sheffield Park, Killerton. The main colour-giving features for later summer are herbaceous borders, roses, hydrangeas, dahlias and bedding plants, but not every garden—and particularly not those more modern and "natural" creations of the plantsmen—can absorb such extraneous features and still retain their individuality. And the last thing the Trust would aspire to would be to make its gardens like public parks. Visitors come to National Trust gardens to see how gardens are made to fit a country house, as created by generations of individuals, each with a longing to add his or her bit of embellishment to the home landscape. Sometimes this meant the adding of odd borders or planting new specimens which often brought about a lot of small detail, fussy and troublesome to tend, and, at times, pointless in design.

Between the wars when labour was plentiful and cheap the cost of tending gardens was not taken into account as it is today, with the result that labour employed was not always used to the greatest advantage. Today it has to be considered whether each border pulls its weight in the everlasting tug-of-war between expenditure and receipts. There are all sorts of ways of simplifying garden work without spoiling the effect. One could select from most gardens in the country some feature that wastes a man's time and does not really contribute to the enjoyment of the whole. Examples are narrow grass verges involving mowing and edge trimming; gravel paths that have no edgings at all and therefore allow weedkiller to spill on to the borders; paving set on the soil instead of being made to exclude weeds by the use of concrete; overgrown hedges that may be 8 feet through and taking an unwarrantable time to clip; small lengths of interior hedge, clipped immemorially, which might be replaced with a row of shrubs without clipping; the use of annual bedding plants instead of permanencies, and the use of herbaceous plants that require staking and dividing instead of those that look after themselves; little specimen bushes dotted on the lawn interrupting the mowing; likewise vases, statues, etc., standing on grass without a

plinth to ease the mowing, and grass banks which are too steep to mow but which could be given a more gentle slope or covered with some dense creeping plant.

The biggest difficulty of the present age in gardening is to know what to do with great kitchen gardens, complete with derelict greenhouses and frames, miles of paths, hundreds of meticulously pruned fruit trees, a played-out soil and sometimes an inheritance, only to be believed when seen, of weeds. A decrepit heating system for the greenhouse often completes the picture. I have yet to find one of these great rectangles, often of several acres, being run well for profit. The days when ten men could be employed to grow fruit, vegetables and flowers for the house have gone, together with double-trenching and thinning grapes. Occasionally a market-gardener can be found as a tenant; sometimes a tenant farmer can be persuaded to take over the area; occasionally a really gifted head gardener can help to make ends meet by producing some crops and with mechanization to keep the area under control. In one or more of the Trust's gardens the whole area is being put down to forestry; in some gardens it might be possible to abolish the glasshouses and frames and create a new area of beauty with grass, trees and luxuriant shrubs on the walls. While this might bring a few more visitors it could quite easily spoil the relationship of ornamental ground and house by upsetting the design, unless tackled with understanding.

Fortunately great help can be obtained from the numerous garden machines and the newer weedkillers. The two together can often save a man's time in a big garden and take away much of the more irksome work. In these days, too, of fewer trained gardeners it is comforting to feel that a mechanically minded man, with little or no knowledge of actual gardening, can do a surprising lot of good work with machines and "chemicals". There are machines for digging, hoeing, cultivating, drilling, sweeping, edging, clipping, scything and other activities, and those concerned with finance will know that the purchase of machinery is not such a dead-weight on the books as, say, a ton of manure.

Apart from well-tried weedkillers and brushwood-killers, there are now hormone preparations directed against broad-leaved weeds and also, separately, against grasses; paths can now be freed of weeds for about two years by one application. Members of The Royal Horticultural Society have a splendid opportunity of seeing exhibits of many of these new machines and preparations at Chelsea Show.

HEDGES

In the majority of the Trust's gardens, a great deal of work has been done during the last few years and many plants have been added, both purchases and gifts. As one looks back the achievement is real, and most of the big jobs are done during the winter months. Hedges have needed a lot of attention. In most gardens I have found that they have in the past been badly clipped and are undernourished. They are as a rule extremely important to the design of a garden, but are not usually

considered as growing plants, but rather as static architectural features, and surprise is felt that they should deteriorate over the years. Often they are choked with grass and ivy at the base, and ivy climbs up the stems; no thought of manure or fertilizer occurs; their roots are cut because they encroach into borders, and their leaves, their breathing mechanism, are clipped off in the summer. In trying to create an effect of a green wall—which is of course always desired—they are clipped with perpendicular sides. The result is that they tend to become wider at the top than at the bottom. Unless this is corrected annually by cutting the more vigorous top and upper portions harder than the lower sides, the underhung bases gradually get weaker with less light and less sap and eventually branches die. This can usually be avoided by keeping the sides gently sloping inwards from the base; the ideal shape for a hedge section is that of a gothic arch, not of a wall. But the gothic arch does not suit all garden design and in any case no hedge remains forever perfect. Annual clipping should be severe; nothing encourages a hedge to get out of control so much as light clipping. If so much as a $\frac{1}{4}$ inch is added yearly to a neat hedge such as a yew, or $\frac{1}{2}$ inch for coarser hedges such as holly or hornbeam, that is the most that should be allowed when once the hedge has been formed; the ideal would be much less. Fortunately most hedges respond to hard cutting-back when they have become unshapely, and yews especially are easy to reshape.

It is necessary to cut back certain hedges very drastically because they are perhaps in poor health but also because on account of their width and height they have overgrown the space originally allowed and, of course, are exceedingly awkward to clip. Our method of reduction, to avoid too much unsightliness, is to cut back one side, and perhaps reduce the top in March one year, and to cut back the other side two or three years later. With yews it is amazing how quickly new growth appears all up the trunks when they are completely exposed. Merely shortening the clipped twigs is seldom successful; the whole side of the hedge should be cut away to the very trunks. Yew hedges in process of being rejuvenated in this way may be seen at Oxburgh Hall, Norfolk; Cotehele, Cornwall; Polesden Lacey, Surrey, and Gunby Hall, Lincolnshire. Box is not so responsive, but fairly good growth can be seen at Polesden Lacey and at Charlecote Park, Warwickshire. I have known beech and hornbeam to respond to pruning well; holly tends to "break" more from the top than the lower portion of the stems, and the hedge is sometimes more quickly remade when the side branches are only cut back half their length. It is essential that a hedge should be growing freely when such drastic pruning is undertaken. A good mulch of manure, or compost and bonemeal, should be given besides a thorough soaking in times of drought. The best time to do such hard pruning appears to be in the spring.

Besides pruning, an extraordinary number of yew hedges in the Trust's gardens and elsewhere are infested with Scale insects. I might add that many stocks of young yews in nurseries are likewise infected;

other shrubs specially prone to attacks from other species of "scale" are cotoneasters, willows and camellias. Usually the first outward sign is a black coating of the leaves; occasionally whole branches in hedges die from the sucking of the sap by the insects. It is a more prevalent scourge on ill-drained, infertile acid soils, and I have so far seldom found it on yew hedges on well-drained and well-nourished chalk soils. An article by the late MR. G. F. WILSON in the R.H.S. JOURNAL **69**, 244–8, may be referred to for full details; suffice it to say here that spraying the undersides of the leaves with nicotine in August (or March) is very efficacious. A further application the following year should be given if necessary.

LAWNS

The half-moon edge-cutter often causes trouble when used injudiciously. In some of our gardens, notably at Sheffield Park and at Montacute—before the present staff was appointed—years and years of trimming the edges in spring with a line and the half-moon has resulted gradually in upwards of a foot of grass being removed from the edges of the lawns. This has made the paths unnecessarily wide at Montacute; in both gardens the gravel finishes abruptly where the original verge was, the intervening space being taken by the natural soil. At Sheffield Park we can use the wider paths and eventual re-gravelling of all the paths will cure the trouble, when the gravel can be afforded. At Montacute there are years and years of work ahead for the slender staff to remake the verges, as and when time can be spared from the regular routine.

I am not sure that pure grass lawns are always the ideal for gardens. So much depends on the size of the lawn and the style of the garden. On upland soils sometimes one comes across a lawn of fine native plants, grass, thymes and all sorts of "weeds" which I would not disturb. On the other hand in such well-tended gardens as Blickling and Hidcote weeds are not regarded favourably. I may be forgiven for holding in admiration a large lawn spread with a continuous white sheet of daisies while I carefully remove every daisy and rosette weed from my own small lawn!

* * *

Several splendid gardens in the Trust are fortunately cared for by their creators or donors. They include Ascott, Buckinghamshire (Fig. 101), where no pains are spared to keep the garden in good trim; the spring display of daffodils, tulips and other bulbs in grass is of special interest, and the trees, hedges and statues add up to an interesting whole. Buscot Park, Berkshire, is a formalized landscape, where recently numerous avenues of unusual trees have been planted (Fig. 97). Cliveden, Bucks., is noted for its long flower borders, and grand views over the Thames; a golf course has recently been turned into a richly planted landscape garden. The Courts, Holt, Wiltshire, is a comparatively small garden of varied design in which is maintained a brilliant display of colour

throughout the season. Gunby Hall, Lincolnshire, has a long pond, cedars and hedges, and long flower borders; the hedges have received much attention recently as they were infested with ivy and needed restoring. Lanhydrock, a noted Cornish garden of 14 acres, contains all hardy species of magnolia, many rhododendrons and other shrubs, besides some formal bedding, set in a beautiful park. Tintinhull, Somerset, has some of the best borders I know for continued interest and specialized colour throughout the season and a formal design with intriguing cross vistas in a comparatively limited area. Upton House, Buckinghamshire, has great cedars, terraced gardens and a large fruit garden, with views over lake and park. To these may be added Bodnant and Nymans. These I have included in the following list which are otherwise managed entirely by the staff of the Trust.

Arlington Court, Devon. The actual garden—a small Victorian design—lies away from the house, but is not the main attraction. There is a great sense of spaciousness obtained from this early-nineteenth-century house, wide lawns, beautiful park and fine trees, among them an immense tulip tree (*Liriodendron tulipifera*) and a great mound of *Rhododendron arboreum*, the usual Cornish red hybrid or form which covers about 3,270 square feet and is 24 feet high. Several new specimen trees have been planted. In early May the thin woodland is a brilliant sight, for thousands of *Primula japonica* seed themselves; with them are sheets of forget-me-not, alkanet, bluebells, primroses, *Claytonia alsinoides* and wood-sorrel. Many "weeds" grow in the lawns, including *Wahlenbergia hederacea* and *Anagallis tenella*. Hydrangeas take on particularly vivid blue colouring. As the whole garden area is tended by one man with only occasional help, the Victorian garden, heavily set with rockery banks and ornamental beds, is in process of simplification; the formal pool has been repaired and the fountain made to work. Along the greenhouse wall grow hundreds of *Amaryllis belladonna*.

Batemans, Burwash, Sussex. A garden created by RUDYARD KIPLING; in fact, his original plan for the rose garden hangs in the house. Many plants and shrubs were added by the previous tenant, MR. C. WOODBINE PARISH, and now MRS. S. T. LEES has taken on the work; unfortunately we inherited a legacy of ground elder in almost every border. Every plant is infested with this weed and in consequence a weedkiller is impracticable. A "five-year plan" is being started, consisting of fallowing one border at a time and cleaning and replanting it. Some simplification of the area towards the kitchen garden, where a mulberry has now reached sufficient size to stand alone on a small lawn, has been undertaken with a view to enhancing the mulberry and economizing in work.

The garden is beautiful in a homely way through the year, from daffodil time to the autumn colouring of shrubs. There is a formal pool (containing hundreds of tame golden orfe), rose garden and lawns. A paved path is a home for rock plants, and a long arched walk is covered with pears and clematises. Old yew hedges have been sprayed against scale and fertilized.

Blickling Hall, Norfolk. A magnificent Jacobean house and fine formal garden covering 41 acres (Fig. 98). From early spring when daffodils and bluebells abound, through the rhododendron season, to full summer when the splendid herbaceous beds and borders and roses reach their full beauty, there is not a dull moment. Colour lasts until mid-September, when *Cyclamen neapolitanum* flowers on grassy banks. Fortunate, indeed, are visitors who can visit the place in early July, for I have seldom seen more attractive and sensitive grouping in herbaceous borders, for colour and form, largely the work of the head gardener. New varieties of herbaceous plants and roses are being tested *in situ* for eventual replacement. Plants and shrubs for June colour have been added and every year we try to plant a dozen or so of July- and August-flowering rhododendrons in the woodland rides. A fresh inlet of clear water has been provided for the fountain; the previous water supply was full of iron and was staining the stonework badly. The wind off the lake frequently does damage to the flower beds and to counteract this a new yew hedge has been planted eventually to replace the flimsy trellis screen.

The finest tree in the garden is undoubtedly the naturally layered oriental plane (*Platanus orientalis*). New specimens and clumps have been planted in the park.

Bodnant, Denbighshire. Superb views towards the Snowdon range, steeply sloping ground, rushing brooks, natural stone and an equable climate were the natural advantages at Bodnant, which have been exploited (Fig. 96) by three generations of keen gardeners. The result is one of the most magnificent gardens in the country, offering almost every aspect of horticulture and a wide variety of trees, shrubs and plants displayed in formal and informal settings. The most famous parts of the garden are the splendid terraces and the deep dell with its stream and great conifers. Numerous improvements have been carried out of late years and much replanting has been done, untidy corners reduced and many new views, especially in the dell, have been opened. It is difficult to single out plants for special mention but I always admire the old brown stems of *Arbutus andrachnoides* on the top terrace; the wonderful collection of magnolias; *Embothrium lanceolatum* 'Norquinco'; the Bodnant form of *Pieris forrestii*; *Pinus montezumae*, *Tsuga sinensis*, *Sciadopitys verticillata*, *Cercis siliquastrum*, *Betula albo-sinensis septentrionalis* and masses of *Daphne tangutica* and other species. Bodnant is famous for rhododendrons, and *R. williamsianum* surrounds a small pool; many new hybrids have been raised in the garden including 'Elizabeth'. While the garden is at its best in early summer, later colour has more recently been added and particularly successful are the long borders devoted to blue and mauve flowers and grey foliage, and the dieramas and *Thalictrum dipterocarpum*, hydrangeas and fuchsias.

Cotehele, Cornwall. An informal garden of 11 acres on several levels, charmingly enlivened by rills and ponds. In the upper garden dominated by an old cork oak (*Quercus suber*) the pond has been reconstructed with excellent results, and a small metal greenhouse has replaced the

crumbling wooden one. An old yew hedge about 7 feet high and as wide has been drastically reduced and mulched, first on one side and later on the other, and the stems have responded well, now presenting a fresh green appearance. A new yew hedge has been planted to screen the allotments.

Sheets of daffodils cover a grass area behind the house and in the valley-garden rhododendrons and azaleas, Japanese maples, and choice shrubs including magnolias and hydrangeas are thriving. Many fresh shrubs and trees have been planted including a gift of several rare shrubs from Bodnant. A formal terrace garden immediately below the house is furnished with spring and summer bedding plants; soft colours assort with the grey walls and the spring flowering of two large magnolias, *M. soulangiana* amd *M. rustica rubra*. Many small borders and grass edgings have been eliminated in the interest of economy and quietness, and in the valley we are encouraging ground coverers, especially the wood-rush, *Luzula maxima* and native ferns. The luzula in particular will, we hope, gradually save a lot of hand mowing on the steep banks. This plant is of grassy effect about 1 foot high, and spreads rapidly but does not appear to be at all detrimental to the growth of shrubs and is practically weed-proof.

The easterly facing valley has tall trees at the bottom, which are beginning to get thin, and in order to preserve the windscreen, western hemlocks (*Tsuga heterophylla*) were planted in the autumn of 1957, and put on about 3 feet of growth last year.

Hidcote Manor, Gloucestershire. Noted for its intriguing design and famous collection of shrubs and plants, so well arranged in its many compartments. Every separate garden has its own particular plant association and colour scheme, and, remarkable though it may seem, practically every section is beautiful through the year, different plants of character keeping up an uninterrupted display from April until September. Many new plants have been put in, among which are a hedge of *Chaenomelas speciosa* 'Rowallane Hybrid' and another of rugosa roses. Fortunately the main hedges, which are such a feature of the place, are mostly in excellent condition, but walls, steps, buildings and ponds have all needed repairs; in addition marauding pigs and cattle have been excluded by new fences. Externally four avenues have had attention; the most important is that of young Huntingdon elms (*Ulmus hollandica vegeta*) which has had its more horizontal branches removed to encourage a gothic-arch shape, and will in time, I hope, be nearly as beautiful as the old Brooklands Avenue at Cambridge, now, alas, only a memory. This avenue leads directly out of such high holly hedges (mostly *Ilex aquifolium altaclarensis*) that they themselves form an avenue, the very reverse in line to a gothic arch. The third is a lime avenue whose lower branches have been removed, and the fourth is the shady walk of beech: here the best stems have been selected and trimmed up. Few visitors realize how rich Hidcote is in these external features.

There was no bad legacy of weeds at Hidcote but a ubiquitous self-sowing of various annual and biennial plants led to a sameness throughout the garden. These are now more controlled so that various species are segregated to areas where they are most appropriate and eliminated from others.

The main work in hand at Hidcote is the gradual replanting of the borders—in which we are fortunate in having the help of MRS. J. B. MUIR—and the removal or pruning of overgrown trees. Several borders have been reorganized and the resulting planting will slowly mature. The rock bank and the terrace garden, in both of which areas alpine plants used to be grown, have been cleaned and in the latter area reconstructed and replanted. The rock bank has been planted with a collection of dwarf and prostrate shrubs, with a view to ground-covering and elimination of weeds. Alpine plants will be grown on the terrace garden and in troughs and sinks, two of which have been renovated.

With regard to the trees, a vast number of holm oaks were planted many years ago and these are now becoming too large. If they were all left to mature, half the garden would disappear under their dense shade. The choice has to be made between removal and lopping, according to the position they are in. It has been possible to remove several and their loss is scarcely noticed; others have been lopped where the presence of a lower evergreen screen is still needed. Fortunately these trees shoot very well from the main stem and trees so treated are, after two summers, already beginning to create greenery at a suitable height, and by subsequent occasional pruning will be kept in hand. The view from the little garden named after MRS. WINTHROP, right through the "Westonbirt" or "Wilderness" area has been reopened; this was practically non-existent owing to luxuriant growth of shrubs and trees.

In the kitchen garden are the two long borders of old French roses, lilacs, Irish yews and apple trees. The last two had encroached heavily on the available space, and have been accordingly reduced: the yews by thinning out the branches and tying the remainder together, so that they are now once again more or less columnar in effect. The apples have been completely bark-ringed to kill them, and severely lopped at about 10 feet, and each has been planted with a climbing plant or rose. The borders are being cleaned and replanted.

The wooden wall of the old plant house still stands, but, visualizing its eventual removal, a collection of new lilacs and other shrubs have been planted so that the greenhouse will be screened.

Ickworth, Suffolk. There is a great planting of cedars, evergreen oaks (including *Quercus lucombeana*) and a fine *Koelreuteria paniculata*. The magnificent design of the garden to the south of the great Rotunda owes much to its hedges. These are mainly of box, about 6 feet high, several feet thick, and in poor condition; the bases were smothered with grass and ivy and overgrown in many places by evergreen trees. The major task in the garden is the restoration of these hedges, and a big start has been made in cutting the grass verges, removing ivy and weeds,

cutting out dead portions, and providing a mulch and fertilizer. In addition over 1,000 young plants of box and yew have been added, and if all goes well, the hedges should look well again in about ten years.

The removal of the flower beds and masses of box plants, kept clipped over an area 10–12 feet in width around the base of the Rotunda, is a great improvement. The design of this extraordinary and exotic building can now be better appreciated, and the work in tending the box bushes and borders has been eliminated; this leaves only grass to be mown and a newly planted hedge of the dark purple "Hidcote" lavender.

Killerton, Devon. Noted for its extremely fine collection of trees and shrubs on about 20 acres of ground steeply sloping to the south, including conifers, rhododendrons, azaleas, magnolias, camellias and many rarities. Specially fine tulip trees in the Chapel grounds and cork oaks (*Quercus suber*). From early spring until midsummer there is a glorious display of blossom; the formal garden at the foot of the slope provides most of the interest later.

There were several difficulties to overcome, the main one being that there was too much detail in the area to enable the staff to keep it properly under control. Many of the trees and shrubs were showing signs of starvation, and it was the policy to take up and remove all fallen leaves. The various specimens are now better in health as the leaves are mostly given to them as a mulch; in windy spots they are kept fairly tidily in place by laying flat, dead conifer branches over them. The gravel from a 5-foot-wide path, about 300 feet long and serving no useful purpose across the lawn, has been removed, soil added and turf laid so that now the whole area can be easily mown. A large area of the formal garden, previously a rather poor collection of roses and annuals, has been planted with permanent things of a ground-covering nature. Among them are lavenders and sages, fuchsias, *Hypericum moserianum*, sun roses, *Sedum spectabile*, yuccas and *Senecio laxifolius*, cotton lavenders and bergenias (megasea saxifrages) and the whole presents a solid and varied furnishing giving colour and interest from leaves and flowers throughout the year. These and other biggish jobs have added considerably to the work in recent years, but in the future the routine will be lessened, allowing more energy for more rewarding work. A gift of choice shrubs has been received from Bodnant and several other new trees and shrubs have been planted. A metasequoia is 26½ feet; *Lagerstroemia indica* is 11 feet high with a circumference of 32 feet; *Taiwania cryptomeroides*, 34 feet high.

Montacute, Somerset. Still showing much of its original late-sixteenth-century design, this eight-acre garden relies very greatly on its lawns and hedges and splendid architecture for its attraction (Fig. 100).

As mentioned earlier, one of the big jobs here is to reinstate the grass verges. Tons of soil and much work will be needed; we hope to do a length every year as soil becomes available and as labour permits. The hedges, all of yew and very ancient, are the cause of some worry, as they

were infested with "scale", and ivy was climbing through them. They have been sprayed against "scale" and are being fertilized and cleaned.

The garden court is surrounded by borders of shrubs and flowers attractively grouped by MRS. P. E. REISS, and give splendid colour through the season. A long border of shrub roses planted by THE HON. V. SACKVILLE-WEST has been given an irregular edging and underplanting of hostas (*H. fortunei*) in order to cover the ground and thus save weeding and also to provide low furnishing.

The north garden contains a central formal pond, with balustrading of nineteenth-century work, complementary to the other garden architecture; this has been carefully repaired and made watertight. Around the lawn stand no fewer than forty-four Irish yews, neatly tied and pruned to the slender tapering shape of their youth. A further thirty of these yews embellish the main drive. Behind them on the surrounding raised path stood a gappy row of Italian cypresses (*Cupressus sempervirens stricta*); several of these were in failing health and were due for removal. It was felt that they added just too much perpendicular line to Montacute, already so well decorated in this way with its stone pinnacles and Irish yews. Accordingly, standard trees on 6-foot stems of *Crataegus carrierei* were selected and planted in formal spacing, eventually to replace the cypresses on the raised walk. The crataegus slowly forms a dense fairly formal rounded head, and will add the orange colour of its large haws throughout the autumn and winter to the greenery of lawn and evergreens. This is one of the Trust's houses which is open through the winter, and a special planting has been made of various shrubs to provide winter foliage, flowers and berries for cutting.

Mottisfont Abbey, Hampshire. Wide lawns, magnolias and magnificent trees; beeches, chestnuts, cedars, sycamores, walnuts, planes. One London plane (*Platanus acerifolia*) is about 100 feet high and has two joined stems and a subsidiary stem; the total canopy exceeds 1,500 square yards. It would be interesting to hear if any trees exceed this size in this country. There is an interesting border composed of *Yucca filamentosa* and *flaccida*, *Fuchsia magellanica* varieties, *Hydrangea arborescens grandiflora* and *Nepeta mussinii*, which gives welcome colour in August. To disguise the rather staring red brickwork of the stable block, some *Magnolia grandiflora* 'Exmouth' have been planted. As it will be many years before these take effect, they have been interplanted with the rapidly-growing *Cotoneaster frigida* hybrid 'Cornubia' which can be removed in due course.

Nymans, Sussex. One of the great plantsman's gardens in the Weald, with fine views and good native trees. There is a most varied collection of rare and beautiful shrubs and trees, many raised from seed from collectors abroad, arranged in a series of garden areas, each one different from the rest. Magnolias and rhododendrons perhaps take pride of place; *M. denudata*, *macrophylla* and *stellata* are represented by extra large specimens, while rhododendrons include a vast range of species. Many of these had become crowded and a lot of transplanting has been

carried out during recent winters, besides clearing large areas of woodland which have become overgrown during and since the war, and where rare and interesting shrubs are thriving. The house, burned out during the war, creates a picturesque ruin and focal point on the main lawn below which is a rock and heath garden of natural charm, Japanese temple, pergola, and borders devoted to blue and purple flowers. Above it is the famous walled garden, beautiful throughout the season. The hardy and adaptable Eucryphia 'Nymansay' was raised here, and many large specimens are growing; other noteworthy plants include *Camellia* 'Leonard Messel', also raised here, ***Styrax hemsleyana***, davidias, stewartias, ***Cornus kousa chinensis***, ***Nothofagus cliffortioides*** and others, lomatias and ***Asteranthera ovata***. During last winter a fence was moved with the result that the grand panorama of the conifer plantation has in effect been brought into the garden, and some new borders have been added to provide more summer colour.

Oxburgh Hall, Norfolk. The main attraction is the French or Knot garden, a veritable glutton for annual bedding plants. Without some annual planting the scroll beds in their edging of box would lose much of their interest, but in the interests of economy some beds have been filled with permanent foliage plants. These include *Ruta graveolens* 'Jackman's Blue', and ***Santolina chamaecyparissus***, both of which give grey-green colouring of markedly different tone and look beautiful throughout the year. A very wide yew hedge had half its width removed in the spring of 1956 and the other half in 1958 and will soon be a compact hedge again entailing much less labour in clipping. Several young beeches and other trees have been planted to take the place of the fine belt at the gateway, where some old ones have fallen. One of the loveliest plants in the garden is the pink form of ***Wistaria floribunda macrobotrys*** (*W. multijuga*) grown as a standard in the shrub border. This border is mainly composed of spring and early summer flowering things, after which a long herbaceous border gives interest.

Peckover House, Cambridgeshire. A Victorian garden, complete with summer houses, beds and borders of flowers, and some conifers and evergreens. There are several fine trees including ***Ginkgo biloba***, ***Fagus sylvatica heterophylla*** and ***Sophora japonica***. Three orange trees, reputedly over three hundred years old, fruit regularly in the conservatory. A small pond was not happily placed in the lawn and was leaking, and therefore it was filled in and a new pond was constructed to grace the small formal area in front of one of the summer houses. Around it a planting of daffodils, paeonies, *Sedum spectabile* 'Brilliant', ***Helleborus niger*** and philadelphuses, together with clematises and roses on the walls, provide an almost non-stop display of trouble-free permanencies. A herbaceous border has been replanted to provide colour in late summer and autumn, when a neighbouring border is fading.

Penrhyn Castle, N. Wales. In the immediate surrounds of the castle are fine specimens of ***Magnolia soulangiana rustica rubra***, ***Acer palmatum***, ***Paulownia lilacina*** and native trees.

In the spring, on the stretches of undulating rough-mown areas daffodils are followed by bluebells and white narcissus. There is a formal garden in which many tender shrubs have been established; we hope that they will continue to thrive although a belt of woodland to the north and east has been felled on the Penrhyn estate. There are many unusual rhododendrons. *Feijoa sellowiana*, *Eucryphia cordifolia* and *Jasminum polyanthum* grow well and a *Magnolia stellata* is 18 feet high and wide. So that more labour will be available in the future for the grounds as a whole several beds and borders, previously given to annual bedding, have been filled with permanent ground-covering shrubs and plants to save work. These include large-flowered fuchsias, grevilleas, penstemons and hydrangeas. Unfortunately in the past some rampageous bamboos were planted in the lower portion of this formal garden and now present a big problem in their elimination; we intend cutting them down and then treating the short growth with a weedkiller.

Polesden Lacey, Surrey. Much of the beauty of this spacious Edwardian garden, with its great lawns and fine native trees, is due to the extensive view over neighbouring hills and recently a large portion of wooded hillside has been purchased, resulting in the entire visible landscape being under the Trust's control. This is an immeasurable advantage. The garden and grounds are permanently open, free, to the public as MRS. GREVILLE wished, and it is highly regrettable that visitors have defaced several urns and other stone ornaments. Two plants of *Clematis armandii* cover about 40 yards of the front of the house. There is a large rose garden, some of the beds in which are being reduced in size, as replacements are needed, to effect economy and also improve the ratio of bed and lawn. The herbaceous border is a fine sight in summer. A steep chalky bank is gradually being covered, to the exclusion of weeds, with *Berberis wilsonae*, *Juniperus chinensis pfitzeriana*, *Senecio laxifolius* and other shrubs. An unusual sight is an enormous clump of echinops growing in rough grass.

With thought for the future, young beeches and cedars have been planted on the lawns; also in the thinning woodland behind the open-air stage and up the main avenue. Every year we try to cut back and reshape a hedge or two. The yew hedge stretching the entire length of the ¼-mile walk designed by SHERIDAN was about 6 feet high and 4 feet through, and this has been reduced in two operations to about 3 feet high and 18 inches through, thus effecting not only a big saving in annual clipping, but also enabling the fine view to be seen and appreciated to the full. In the spring of 1959 a box hedge was so treated also, and is making very fair recovery, although, even with mulching and watering, box is not very responsive. Big clumps of evergreens very often appear to be static, but the growth they put on annually is prodigious and the only way to keep them under control is to remove about one-third of the longest shoots every year; if this is not done, the time eventually comes when they must be more drastically pruned. The big yews near the Roman bath have been treated thus during last winter; it will be some

years before they look respectable again, but they had grown so large that they had killed a long yew hedge and were encroaching on the lawn too much.

The two end trees of a young lime avenue had caused the same trouble too near the house; the offending pair was removed and the hedge, adjoining the piers of an iron gate, was replanted in the autumn of 1957.

Powis Castle, Montgomeryshire (Fig. 99). 25 acres. In spite of the terraces being rather exposed to the east many rare plants and shrubs thrive, including *Feijoa sellowiana*, *Arauja sericofera*, *Buddleia colvilei*, *Caesalpinia japonica*, *Solanum jasminoides*, *Hoheria lyallii*, *Clerodendron bungei*, *Punica granatum*, *Vitex agnus castus*. The climate seems to suit shrubs from the southern hemisphere. The views over the countryside from the upper terraces, complete with their ancient lead ornaments and old brickwork, are superb. The Long Mountain lies across the horizon. There are some magnificent clipped yews, cone-shaped specimens and hedges, reaching up to some 30 feet or more, and a box hedge 15 feet high. The whole garden is beautiful from spring-time, when numerous flowering cherries, various shrubs, rhododendrons (species and varieties), azaleas, daffodils and bluebells colour the less formal parts, to high summer when the long terrace borders take over and continue until the appearance of autumn colour. There are many fine Japanese maples, magnolias, eucryphias, cornuses, davidias, nothofaguses, cercidiphyllums, also a *Ginkgo biloba*, *Quercus suber*, *Abies procera*, *nordmanniana* and *grandis*, and *Acer palmatum* 'Senkaki'.

Many shrubs have become overcrowded owing to close planting and the main work of the next year or two will be transplanting those that are still suitable. An extensive planting of the rhododendrons and azaleas has been made recently in the Wilderness, where there are many fine oaks.

The two avenues of tall pyramid apples on the site of the old kitchen garden are probably unique for their length and age in this country; they are believed to be about seventy-five years old.

Sheffield Park, Surrey. Noted specially for its display of autumn colour from dozens of *Nyssa sylvatica*, maples, photinias, azaleas and numerous other exotics and natives, this magnificent landscape garden is beautiful from daffodil and bluebell time, when camellias, azaleas and rhododendrons create a scene of great splendour, and through to mid-summer, when sheets of waterlilies on some of the four large lakes give unusual beauty. Among the rhododendrons are hundreds of Angelo and Loderi crosses. Many rare and fine conifers add to the interest through the year, and fortunately for the Trust this garden—or landscape planting—is still maturing; the exotics were mainly planted during this century and some oaks and sweet chestnuts are of immense age. The house and its surrounding lawns do not belong to the Trust.

Much of the overgrown back woods have been cleared during recent winters and the whole place is more or less under control, although a

number of specimens will need removal or pruning where they are encroaching on each other.

The second lake was half filled with reed-mace and other rushes and weeds, but was cleared out, and the islands restored in the winter of 1956–7; likewise the waterfall now works once more; a great attraction has thus been brought into being again. The beds of *Gentiana sino-ornata*—the only straight lines in the place—have been replanted and gently curved. The incrustation of vases has been removed from the main bridge, giving a quieter effect, and the lower stone bridge was unsafe and has been replaced by a gently arched structure.

Stourhead, Wiltshire. The maintenance and gradual resuscitation of the many acres of beech trees, now over two hundred years old and fast decaying, which create the hanging woodlands on all rising ground above the main lake is one primary and over-riding need and objective of the Trust. Below this area is the important planting (about 35 acres) of exotic conifers, broad-leaved trees, and flowering shrubs, which were added during the last hundred or so years. Everything is being done as far as funds permit to reafforest the slopes with beeches and other similar trees; to simplify and adjust the more garish planting of the numerous rhododendrons and azaleas; to add some groups of flowering shrubs for July display in sympathetic colours so that there is some interest between June and August when the hydrangeas open; and to continue the occasional planting of great exotic trees when clearings or falls provide space. Many old decrepit trees and poor bushes have been removed, opening up lost views.

Stourhead is beautiful throughout the year, whether from sheets of Lent lilies or bluebells, during the heyday of rhododendrons, the richness of summer, with soft bluish hydrangeas reflected in the waters, or when autumn adds all nature's seasonal pallette. Even in the depths of winter the place is of wonderful attraction; then the temples and grottos and coloured willows are paramount. Much work has been done in mending leaks in the dam and restoring the water levels in the grotto and in Diana's Basin. Encroaching reeds and bushes have been cleared on the islands. The waterfall and wheel have been made to work and the splashing can now be seen as well as heard. We try to re-gravel a length of path each year.

In a garden, or rather a landscape planting, such as this great tidiness is not desirable, but war has been made on clumps of nettles and seedling brambles which crop up around the shrubs. Removal by hand and spraying with selective weedkiller are the two methods employed. All starved-looking rhododendrons growing on grassy, sunny slopes have had grass removed and have been mulched with compost or leaf-mould, which has resulted in an improvement in health. Those which do not respond to this treatment are being removed to cooler quarters.

Trelissick, Cornwall. It is the prerogative of Cornish gardens that they shall specialize in rhododendrons and shall be at their best in spring and early summer. Trelissick is no exception, but masses of

hydrangeas and other summer-flowering shrubs, *Thalictrum dipterocarpum*, heliotrope, cannas, crinums and roses carry on the colour until the autumn leaf display.

A reorganization of the labour available, transferring most of it from the kitchen garden to the ornamental garden, has enabled us to deal drastically with overhanging tree branches and laurels which were damaging the flowering shrubs, and to transplant some of the overcrowded smaller specimens; also to simplify the mowing by removing little beds and odd plants. The lawns have been treated with selective weedkillers as there were more weeds than grass. There is a total of 13 acres, including the kitchen garden, which is being gradually freed from weeds and reorganized for labour-saving crops.

Wallington Hall, Northumberland. The actual gardens are approached through woodlands on the opposite side of the road from the Hall itself, which is surrounded by lawns. In the garden is a conservatory with beautiful fuchsias and other shrubs trained up pillars and walls; long walls divide the sloping land and support lead vases. The vast size of this ornamental kitchen garden, infested with bad weeds over most of its area, necessitated drastic reduction, and a large portion, including a range of derelict greenhouses, is being cleared for afforestation. The remainder is being reorganized and concentrated and new borders of shrubs and perennials are due to be planted.

In addition to all these famous places in England and Wales, there are two in Northern Ireland which should be classed among the best, both of which I have visited more than once, before they came to the Trust. Mount Stewart is noted for its spectacular design, and numerous rare and beautiful trees, shrubs and plants, all used with skill to accentuate the design. Many would not be hardy in England, but are blessed at Mount Stewart with a very mild climate on the northern shore of Strangford Lough. Cordylines, dicksonias, eucalyptuses, nothofaguses, embothriums, eucryphias, tricuspidarias, mingle with tender rhododendrons, *Rosa gigantea*, cestrums, colquhounia, camellias, magnolias, and many shrubby and herbaceous plants which over here are treated as annual bedding plants.

Rowallane, equally noted for its rare and beautiful shrubs, is a more natural garden with a less favoured climate. THE HON. MRS. JEAN O'NEILL, who advises on the maintenance of the garden, writes me as follows: "Since the National Trust accepted Rowallane in 1955, it has been possible to restore order to most of the garden. Borders and undergrowth have been cleared, and a liberal mulch has given fresh vigour to many plants. Those who remember clumps of *Kirengeshoma palmata* and rodgersia species, particularly *R. pinnata superba*, would not be disappointed to see them now. The Rowallane varieties of *Viburnum tomentosum*, hypericum, chaenomeles and primula, continue to flourish. *Nothofagus cunninghamii* and *N. antarctica* are fine specimens, also *Magnolia veitchii*, *watsonii*, and *dawsoniana*. A specimen of *Desfontainea*

Photo, J. E. Downward

THE GARDENS OF THE NATIONAL TRUST

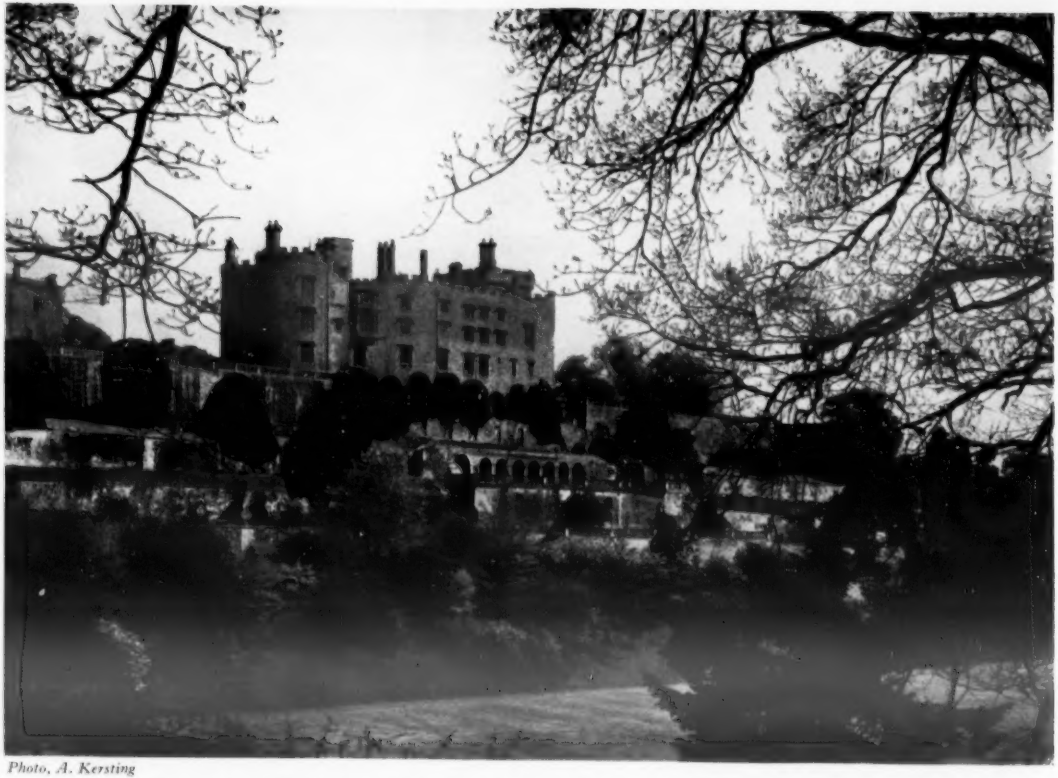
FIG. 96—In the dell at Bodnant (see p. 345)

Photo, Country Life

FIG. 97—Buscot Park. One of the long vistas, down which water flows into the long canal (see p. 343)

Photo, Graham S. Thomas

FIG. 98—The formal flower garden at Blickling Hall, with the lake stretching into the distance, and part of the great oriental plane on right (see p. 345)



Photo, A. Kersting

FIG. 99—The early eighteenth-century terraces at Powis Castle provide homes for many unusual shrubs, including several from the southern hemisphere (see p. 352)

Photo, Humphrey and Vera Joel

FIG. 100—Formal pool at Montacute (see p. 348)

Photo, Graham S. Thomas

FIG. 101—The French garden at Ascott (see p. 343)

Photos, P. Sandberg

THE GENUS HOSTA

FIG. 102—*Hosta lancifolia* (see p. 362)

FIG. 103—*Hosta sieboldiana* var. *elegans* with *H. albomarginata* in foreground (see p. 359)

FIG. 104—*Hosta crispula* (see p. 360)

FIG. 105—*Hosta undulata* (see p. 361)

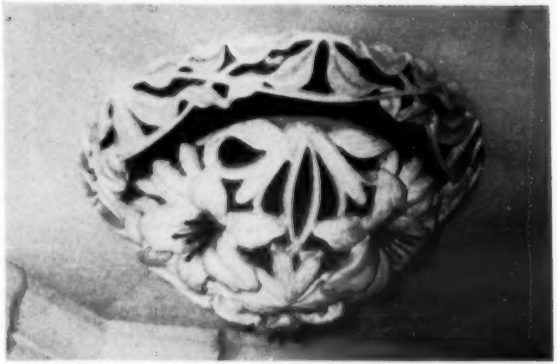


FIG. 106—A design based on *Lilium regale* (see p. 367)

FIG. 107—Roses full blown and in bud (see p. 368)

FIG. 108—A boss using an iris as its motif (see p. 368)

FIG. 109—*Magnolia grandiflora* (see p. 368)

FLOWERS IN PLASTER

Plaster bosses in Eton College Chapel

spinosa is 99 feet in circumference, and *Hydrangea sargentiana* is 22 feet across. While the main period of display is spring and early summer when rhododendrons and azaleas are flowering, there is continued colour and interest throughout the year, colchicums and autumn colour providing the last display after which one can appraise the value of many fine conifers."

Much work of restoration is going forward in other properties. At Charlecote, simplification goes hand-in-hand with clearing and replanting the North Garden; at Croft Castle, Herefordshire, new borders have been planted; at Rufford and at Hughenden a general cleaning and refurbishing; at Overbecks a lot of clearing has been done recently; it is a most involved and heavily planted sunny slope in sheltered Salcombe, Devon, containing a good specimen of *Magnolia campbellii*, besides many beautiful shrubs and trees, but is crippled by lack of funds.

Several new properties have recently come to the Trust, which, although they are not necessarily noted for their gardens, have several points of interest such as the fine views of the Severn and over the countryside from a steeply sloping bank of shrubs and trees at The Weir, Herefordshire; Berrington Hall, Herefordshire, the home of many good plants and shrubs; the magnificent Victorian landscaping at Waddesdon, Buckinghamshire, where much work is being done in cutting back overgrown shrubs and trees and the partial restoration of summer bedding plants on the main terrace; the great oak and the prospect over water and park at The Vyne, Hampshire, where a new rose garden is being planted by the tenant, THE HON. ANTHONY LYTTELTON; and Hardwick Hall, Derbyshire: here is a large area divided into formal gardens of considerable importance, richly planted with flowering plants and shrubs and some fine trees. A general scheme of improvement has been decided.

In conclusion I should like to stress once again how dependent the Trust is upon legacies and donations to supplement its endowments and membership subscriptions. Every now and again some high-minded benefactor comes forward and offers a donation towards some special property or class of properties, or district. In fact in the Trust's woodlands, private individuals can give some small sum which can enable it to plant, say, an acre of trees. There is no reason why those with a love of gardens should not benefit its gardens in the same way, for, up to the present, the Government has not seen fit to provide financial help for the upkeep of gardens, though it does provide help for the maintenance of historic buildings. The Trust does, indeed, need help, as will be seen from the above remarks, in certain gardens.

Full details of all the above properties, the names of the donors, their exact position geographically and times of opening to Members and the public, are given in the *List of Properties*, issued by the Trust, free to members.

THE GENUS HOSTA

Nils Hylander

THE genus *Hosta*—or *Funkia*, as it is still often, although incorrectly, called in gardens—is of East Asiatic origin. It forms a very well-circumscribed group and seems to have no near relatives. In most text-books it is placed next to the genus *Hemerocallis*, the day-lilies, but this relationship must be doubted since the two genera differ in most respects as to leaf type, flower shape, inflorescence, etc., as well as cytologically. *Hemerocallis* has recently, on good grounds, as it seems, been removed to the *Amaryllidaceae*, while *Hosta*, on the other hand, has by some authors been united with the *Agave* group in a family called *Agavaceae*. This position, too, seems rather doubtful with regard to the great differences in habit and flowers between the two groups and is based merely on the remarkable similarities in the chromosome set.

The somatic chromosome number in *Hosta* is as high as 60—with one known exception, in which it is 90—which seems to imply the extremely high basic number of 30, and since they are very small and clumped together, they have not hitherto allowed a closer analysis. This is a pity since they would otherwise have been a valuable means of revealing some of the many puzzling forms which are known from gardens and which are most probably of hybrid origin, as indicated by their more or less total pollen and seed sterility. The species, as known from nature, have normal pollen and set normal seeds, as they do in cultivation also: but while nothing is known about their ability to form hybrids in the wild state, they do so in gardens as soon as two or more of them are grown together, which is often the case in botanic gardens and in private gardens too.

In addition to those species and hybrids which have long been grown in European gardens and have been kept distinct thanks to the usual and very easily effected mode of propagation by rhizome division, there may, for that reason, very well occur additional clones raised from seeds after free flowering in such species mixtures; and new clones may be formed again and again. No consideration could be given to such forms in the following survey. One single species, *H. ventricosa*, differs from the others by giving a totally uniform offspring even when grown together with other species, thanks to its apomictic seed formation.

There is even a remarkable vegetative variability to be found in some of the horticultural forms, namely in those with variegated leaves, where sports with pure green leaves often occur and may be kept constant by vegetative propagation; some of these are, as a matter of fact, offered separately in the nurseries (see below under *H. fortunei* and *H. undulata*).

Due to the occurrence of hybrids and the great variability within some groups of the genus, it is difficult to give the number of *Hosta* species. MAEKAWA, in his monograph of the genus in 1940, recognizes

thirty-nine species, but this number is rather uncertain, since his delimitations are questionable in many cases. The forms which are more extensively grown in European gardens may be arranged in ten main groups, some of which seem to be true species, while others (*H. fortunei*, *H. undulata*, *H. lancifolia*) are most probably of hybrid origin, although they may be treated taxonomically in the same way as the former ones as long as their hybrid nature has not been proved—in no case has it been possible to state with certainty which the parent species are. In addition, three species (*H. longissima*, *H. rectifolia* and *H. tardiflora*) are mentioned below as occurring in European gardens although much more rarely.

The two last-mentioned species were not grown there until the 1890s, and a little later still is *H. decorata*, which seems to have been first imported into the U.S.A. about 1900 and from there sent to Europe. On the whole, the Hostas must be considered a rather late element in the European garden flora since even the species first introduced, *H. plantaginea*, was not grown there until about 1780. In 1790 the other Chinese species, *H. ventricosa*, was imported into England (together with *plantaginea*), but after then no more introductions were made until about 1830, when SIEBOLD brought a considerable number of Japanese clones to Leyden, many of which are now among the most important ones in European gardens.

Fortunately, most of his introductions were validly described soon after they had been brought to Europe, but still the nomenclature and taxonomy of these forms has been extremely confused. As a matter of fact, this confusion started at the same time as the first *Hosta* was published with a binary name. This was what we now call *H. lancifolia*, which was first described by THUNBERG in 1781 as *Aletris japonica*. THUNBERG collected herbarium material of this plant, which is still in his herbarium in Uppsala, but did not bring any living *Hosta* material to Europe. On the other hand, he was not the first European to see and describe a *Hosta*, for two species of the genus were seen by the German physician ENGELBERT KAEMPFER on his visit to Japan in 1690–92 and described in the fifth fascicle of his book "Amoenitatum Exoticarum Politico-Physico-Medicarum Fasciculi V" in 1712. Thanks to his drawings of the plants, still in existence in the British Museum (Bloomsbury), these can be identified as *H. lancifolia* and *H. sieboldiana*. KAEMPFER also mentioned the Japanese name for *Hosta*, Giboosi, which MAEKAWA later used as a name for the section (or subgenus) to which all species belong except *H. plantaginea*, which alone forms the section (or subgenus) *Niobe*.

This differs in so many respects from the rest of *Hosta* that it could very well be treated as an independent genus, if anything could be gained from that procedure. Its very large, densely crowded and more or less upright flowers are pure white and scented (not more or less violet and scentless as in the rest of the genus), the stamens are united to the perianth tube, not free as in the other species, and the flowers have,

in addition to the normal bract, also a bracteole which is otherwise lacking in *Hosta*.

The characters which can be used for the distinction of the main *Hosta* groups in our gardens are in the first place the form, colour and venation of the leaves, the petiole type, the type of bracts, and the form, colour and size of the flowers. Similar characters must be used for the distinction of the different clones within the main groups. Some of these characters are lost by preparation of specimens for the herbarium —which is quite a difficult process, since the leaves and flowering stems are extremely rich in a slimy sap—and therefore the identification is very difficult, except on living material or with the aid of good photographs of living specimens. It has not been possible to reproduce here more than a few such pictures, but a fuller collection is to be found in my treatise "The genus Hosta in Swedish gardens",* where all the Hostas to be found in British gardens are described in detail with the addition of a full synonymy and lists of illustrations.

In the following review of the cultivated taxa no English names are mentioned for the different species (or hybrid groups), since there seems to be little need for them. As regards the common name plantain lily, it cannot be said to be very adequate, since no *Hosta* species—except, perhaps, *H. decorata*—offers any great similarity to any species of *Plantago*. Originally it was given to *H. plantaginea*, in accordance with its Latin epithet—and this, in its turn, does not refer to *Plantago* but to *Alisma plantago-aquatica*, the leaves of which have a slight similarity to the *Hosta* in question.

1. **Hosta sieboldiana** (Hook.) Engl. (syn. *H. glauca* (Sieb.) Stearn).

Large species, forming extensive groups; petiole narrow, not (or scarcely) winged, deeply sulcate; leaf-blade large, ± cordate, flat, very thick and rigid, on both sides very pruinose and grey, with *c.* 12 veins on either side of midrib; stem not or only slightly rising above the foliage, thick, pruinose, leafless or with a single leaf; raceme short and dense; bracts broad and firm, before anthesis densely crowded in the manner of an artichoke, pruinose and often ± violet-suffused, rapidly withering after flowering; flowers early, with large, not striate, pale violet perianth; anthers light yellow—whitish or grey-margined; pollen good; capsules well developed with numerous seeds, rather long, cylindric-clavate, ± pruinose.

This large-growing, early-flowering species is always characterized by its thick, more or less cordate leaves with thick bloom on both sides and light-coloured flowers. Otherwise it seems to be rather variable both in nature and in cultivation. The typical form, which was introduced by SIEBOLD from Japan and described as *Funckia sieboldiana* by HOOKER in 1839 and as *Funkia sieboldi* by LINDLEY in the same year, has rather narrowly cordate and unwrinkled leaf-blades and unusually long (*c.* 5·5 cm.) and narrow flowers, the colour of which is (according to

* *Acta Horti Bergiani*, Vol. 16, No. 11, 1954, 90 pp., 24 full-page plates in black, 2 plates in colour; Price 13 Swedish Crowns.

RIDGWAY's *Colour Standards*, 1912) "light vinaceous grey" on the tube and "pale lobelia violet" on the segments. On the Continent as well as in Sweden, another form is commonly grown, which is distinguished by shorter flowers with wider and almost white limb and more rounded-cordate, distinctly rugose leaves (Fig. 103). I have called it var. *elegans*, but it may be identical with a cultivar raised and distributed by the German grower G. ARENDS as *H. fortunei robusta*, under which name it often passes in Swedish nurseries. It is perhaps still finer for planting as a border plant in shade than the main form, but I do not know whether it occurs in British gardens yet. The main form seems, on the other hand, to be rather common there.

2. **Hosta fortunei** (Bak.) L. H. Bailey.

Large-growing, forming extensive groups; petiole with deep furrow and distinct wings; leaf-blade large and firm, not undulate (except in the variegated var. *albopicta*), ± cordate or cordate-ovate, distinctly pruinose underneath, on the upper side slightly or not pruinose and mat greyish green—pure green, usually with 8–10 pairs of lateral veins; flowering stem rising slightly to far above the foliage, thick, ± pruinose, usually with one to several leaves; raceme rather short, dense and many-flowered; bracts ± violet-suffused, with or without pruina, distinctly shovel-like and before anthesis densely aggregated, the lowermost ones often ± leaf-like; perianth not (distinctly) striate, of a rather intense (often remarkably reddish) violet colour, with narrow segments; anthers ± bluish with irregular pollen; fruit abortive (rarely a few developed, but ± abnormal); most types flower rather late.

This group of cultivars is nearly allied to *H. sieboldiana* by its more or less well developed pruina, the broad, often cordate leaves and its mode of growth and most probably consists of a series of hybrid clones, one of the parents of which is probably *H. sieboldiana*. These clones differ *inter se* in the form of the radical leaves, the number and shape of the stem leaves and the form and colour of the flowers—to some extent also as regards the time of flowering. This is usually distinctly later than in *H. sieboldiana*, and the colour is of a deeper violet shade. Unfortunately, I do not know the English garden material well enough to give any information about what clones of this group it includes; those grown in Sweden are described in detail in my book of 1954. On the whole, the history of this group is quite obscure, except that one clone must belong to SIEBOLD's importations about 1830, namely the variegated form which I have called var. *albopicta* (Miq.) Hyl. This differs from all the other *fortunei* forms by its radical leaves, where the blade has a rather narrow, pure green border but is otherwise, especially in early summer, of a ± yellowish-white colour with a ± pronounced net of fine transverse veins or, later in the summer, yellowish to pale green.

This plant seems to be widely spread both in European and North American gardens but occurs in nurseries under a great variety of more

or less incorrect names, most often perhaps as a variety of *H. ventricosa*. Not rarely it gives rise to a sport with pure green leaves, which is apparently offered independently by Swedish nurseries and may occur in British gardens too. Another form within this complex is most probably also a sport of var. *albopicta* but deviates in the opposite direction, since its leaves are, even in their marginal parts, uniformly pale yellowish green or, in spring, almost waxy white. This *f. aurea* (Wehrh.) Hyl. is offered by German and Swedish nurseries.

3. **Hosta elata** Hyl. (syn. *H. montana* Maek.—nom. illeg.; *H. fortunei* var. *gigantea* L. H. Bailey).

Forms dense, eventually very large groups; petiole long, with deep furrow; blade up to 30 × 18 cm., firm but thinner than that of *H. sieboldiana*, on the upper side becoming pure dark green and somewhat glossy, when young with distinct but thin bloom, on the under side mat and with thin but persistent bloom, in the marginal parts distinctly wavy, ovate-elliptic—elongate-cordate (rarely broadly cordate), with (8–)10 pairs of lateral veins; stem rising far above the rosette leaves, up to 90 cm. tall, slightly pruinose, often with an isolated bract at some distance below the main part of the inflorescence, otherwise leafless; raceme long with the lowermost 2–3 flowers rather far apart, in the upper part dense; bracts persistent, ± light yellowish green, ± patent even in fruit, the upper ones with a distinctly recurved point (already in the bud stage); perianth 5–6 cm. long, above the tube gradually widening into a funnel-like limb with half-expanded, nearly straight segments, rather light bluish violet; anthers yellowish white with greyish margins; pollen ochraceous, (almost) regular; fruit (as a rule) well developed, narrowly cylindrical; seeds 10–13 mm. long. Flowers early (at the same time as *H. sieboldiana*, or most types a little later).

This species, too, has much in common with *H. sieboldiana*, *inter alia*, in the type of petiole, the occurrence of a layer, although thin, of pruina on the leaves and the long flowers, and like *sieboldiana* it comes from Japan, where it seems to be common in Hokkaido and Honshu. Very little is known about its horticultural history—it is remarkable that it seems impossible to trace it with certainty further back than to BAILEY (1915), although a wood engraving of "*Funkia lancifolia*" in NICHOLSON & MOTTET (1893–94) may belong here. In any case, it is met with in Sweden in different clones, some broad-leaved, some more or less narrow-leaved, but all with the characteristic patent, whitish bracts. It has been offered under various names, usually confused with *sieboldiana* and *fortunei*. It seems to be rare in British gardens but was given an Award of Merit by the R.H.S. in 1956 (see R.H.S. JOURNAL **81**, 1956, Fig. 130).

4. **Hosta crispula** Maek. (syn. *H. fortunei* var. *marginato-alba* L. H. Bailey; *H. coerulea* f. *albo-marginata* Voss).

Densely caespitose, slow-growing but eventually forming very large groups; petiole rather short, that of the outer leaves broadly flattened and

broad-margined, that of the inner canaliculate and with narrow wings; leaf-blade epruinate, on both sides pure green, mat above, glossy below, with a somewhat irregular, rather broad, pure white border, (7–)9 lateral veins, strongly crispate margins and elongated, narrow, ± spirally wound point, ± elongate-cordate—ovate-lanceolate or elliptic; stem rather slender, sometimes with one ± elongated bract-like leaf; inflorescence long and lax with the lowermost flowers far apart; bracts small, short, pale yellowish green, nearly flat and patent; perianth usually 4–5 cm. long, not striate, lavender, limb regularly but broadly funnel-shaped with rather strongly expanded segments; anthers first very large with yellow back, later short and violet; pollen (rather) regular, ochraceous; fruit as in *H. elata*; seeds 8–10 mm. long. Flowers rather late.

This Japanese plant was not given specific rank until in MAEKAWA's monograph in 1940 but is undoubtedly quite distinct even from *H. elata*, which it resembles in habit and the patent bracts (Fig. 104). These are, however, of a different texture, the petiole is of quite another type, and the leaves and stems totally lack the bloom, common to all the foregoing taxa. It is a very elegant plant, thanks to the pure white border of the slightly wavy, otherwise dark green leaves and has the advantage of growing well also in rather sunny positions. In Sweden, where it is rather common in gardens, it has mainly passed as a form of *lancifolia*, with which it has very little in common. Most probably all *crispula* plants in European and American gardens belong to the same clone, originated from the material which SIEBOLD brought to the Netherlands. Although introduced so early, *H. crispula* is astonishingly seldom (and only recently) pictured in literature—scarcely at all from the British Isles, where it seems to be very rare. In some instances I have seen single shoots with pure green leaves, but this form is not separately offered in nurseries, nor is anything known about its occurrence as a wild plant in Japan.

5. **Hosta undulata** (Otto & Dietr.) L. H. Bailey.

Polymorphic, probably hybridogeneous group of sterile clones, rather small-leaved but usually with rather high stems, entirely without pruina; leaf-blade ± oblong- to rounded-elliptic, strongly undulate, usually with *c.* 10 pairs of lateral veins, pure green near the margin, but the median field always ± pure white; petiole with deep furrow and ± distinct wings, like the stem red-dotted towards the base; stem reaching far above the leaves, rather slender and flexible, often white, with several well-developed leaves passing ± gradually into bracts; (upper) bracts withering rapidly after anthesis; perianth rather light violet, somewhat striate, with rather pronouncedly recurved segments; anthers violet with ochraceous irregular pollen; fruit abortive.

Besides the typical group of rather low-growing forms, characterized by narrow, intensely undulate leaves, with the white part often very broad, there is also another group of more vigorous clones, further distinguished by less undulate leaves with a narrower median band or

stripe of white. This group is in my opinion more worth cultivation than the typical *undulata*, and since it seems (at least in Swedish gardens) rather sharply defined, it seems worth distinguishing as a variety under *undulata*: var. *univittata* (Miq.) Hyl. (Fig. 105).

There is also a plant with pure green leaves closely connected with *H. undulata* although spread in gardens independently and usually referred to in nurseries as a *ventricosa* form. This is *H. undulata* var. *erromena* (Stearn) Maek, first described by BAILEY in 1930 as *H. lancifolia* var. *fortis* but later confused by him with the true *lancifolia* and in 1932 raised to specific rank by STEARN as *H. erromena*. It differs most pronouncedly from all variegated *undulata* forms by its broader leaves (even the cauline ones broadly elliptic—rounded elliptic), which are nearly flat and glossy green, and by its green, tall (up to 1 m. high) stems. Still, MAEKAWA was certainly correct when he placed it under *undulata*, since similar green sports occur often within different clones of *undulata typica* and *undulata* var. *univittata*. Most probably, however, the *erromena* of gardens—where it is widely distributed in England as well as in Sweden and North America—is most probably the same clone as that introduced by SIEBOLD from Japan. It is everywhere very uniform as regards leaves and flowers.

6. **Hosta lancifolia** Engl. (syn. *H. japonica* Voss—non Tratt.).

Rather small, growing in dense regular tufts, not pruinose but with red-dotted lower parts of petiole and stem; petiole narrow, with sharp but not markedly winged margins; leaf-blade rather thin but firm, on both sides pure green and glossy, ± long-pointed, ± ovate-lanceolate—lanceolate, arcuately overhanging, up to 17(–18) × 7(–8) cm., with usually 4 pairs of lateral veins; stem usually 30–40 cm. tall, rising far above the rosette leaves, slender but firm, more flexible than in the foregoing species and often ± arcuate, ± brownish, below the inflorescence normally with some leaves; lowermost bracts often leaf-like; normal bracts pure and glossy green, entirely herbaceous, firm, acute, narrowly navicular, before anthesis rather patent; perianth *c.* 4 cm. long, with very narrow and acute, strongly recurved segments, rather dark violet, on the inner side with darker stripes; anthers violet with ochraceous, ± abortive pollen; fruit abortive. Flowers late.

Hosta lancifolia seems to be common both in European and American gardens (Fig. 102). It is a good border plant, which grows well even in rather dry and sunny positions. It was imported to Europe by SIEBOLD and depicted by LODDIGES from British specimens as early as 1831.

7. **Hosta tardiflora** (Irving) Stearn (syn. *Funkia tardiflora* Irving; *Hosta sparsa* Nakai).

Low-growing, non-pruinose plant, forming 15–30 cm. high mounds of leaves with almost leathery, more or less lanceolate, long-tipped, very dark green blades; inflorescence unusually broad (at anthesis ± broadly ovoid) with rather numerous, ± crowded flowers; perianth 3·7–3·9 cm. long, narrowly funnel-shaped with widely expanded and slightly recurved seg-

ments, "pale purple" with darker veins; fruit not seen. Flowering extremely late: in English gardens, end of September or beginning of October to November.

This characteristic Japanese plant is certainly closely related to *H. lancifolia* but differs enough to be kept as an independent species. The plant grown in English and American gardens seems to consist of one single clone, brought to Europe by MR. MAX LEICHTLIN of Baden-Baden and grown in Kew Gardens since 1895. It was magnificently figured in *Curtis's Botanical Magazine*, vol. 169, tab. 204, 1953, together with a detailed description by W. T. STEARN. According to STEARN, this species is only known in cultivation; another clone was described by NAKAI as *H. sparsa*.

8. **Hosta longissima** Honda (syn. *Funkia lancifolia* ε *angustifolia* Reg.).

Leaves up to 35 cm. long, their winged petiole gradually widening upwards into a narrow, 1·5–2·5 (–3) cm. broad blade; leaf-blade ± spatulate-(or lanceolate-) linear, usually definitely broadest above the middle, tapering rather suddenly towards the obtusish or very shortly acute tip, with 3–4 pairs of nearly straight lateral veins, flat, pure green, rather mat, in texture like that of *H. albomarginata*; stem up to 50 cm. high, with several small leaves, ± gradually passing into bracts; bracts and flowers similar to those of *H. albomarginata*, but bracts firmer.

The European garden plant described above is certainly identical with one of the plantain lilies introduced by SIEBOLD, namely his unpublished *Funkia lanceolata*, but was later often confused with *H. lancifolia*. However, it is more closely related to *H. albomarginata*, with which it has in common the type of bracts and the leaf texture. It has the most linear leaves of all *Hosta* species and seems to be a slow grower, which may be the reason why it seems now to be very rare in European gardens. For my own part, I have only seen it once (in Hamburg).

9. **Hosta rectifolia** Nakai.

Forms dense clumps with slightly creeping rhizomes; petiole unspotted, with broad wings and gradually widening into the blade; leaf-blade ± broadly lanceolate to ovate-lanceolate or sometimes ± narrowly ovate, 13–15 × 3·5–9 cm., nearly erect or somewhat expanded, with 3–7 pairs of lateral veins, dark green, rather mat but without pruina; flowering stem thick and firm, rising well above the leaf mound, 40–90 cm. high, usually leafless; raceme long, loose, with numerous flowers; bracts closely overlapping before anthesis, navicular, herbaceous, green but often purple-tipped, blunt; perianth (according to STEARN) "up to 4·8 cm. long, cobalt-violet, with deep violet veins and transversal lines", above the tube suddenly campanulately widened, its lobes half-expanded, not recurved, ± ovate with distinct tip; anthers pale whitish-yellow with narrow violet margins; fruit well developed, rather narrowly cylindrical.

Like *H. tardiflora*, this species has recently been figured in *Curtis's Botanical Magazine* (vol. 168, tab. 138, 1951) together with a detailed

report by STEARN. According to him, "it was raised at the Royal Botanical Gardens, Kew, from seed received in 1897 under the name of *Funkia longipes* from the Tokyo Botanic Garden"; it flowered at Kew for the first time in 1901. It is now to be found also in some private British gardens but is otherwise unknown to me as a garden plant. Its natural distribution includes, according to STEARN, northern Honshu, Hokkaido, Sakhalin and the southern Kurile Islands.

10. **Hosta albomarginata** (Hook.) Ohwi (syn. *Funckia albo-marginata* Hook.; *Hosta lancifolia* var. *albomarginata* (Hook.) Stearn).

Rather small, resembling *H. lancifolia* in habit, but of more spreading growth, not densely caespitose, in all parts without pruina; petiole narrow but distinctly winged, unspotted; leaf-blade thin and soft, almost flat, mat on the upper side, pure green on both sides, but in the main form with a very narrow pure white border, small (up to 14×6 cm.), ± narrowly elliptic—lanceolate or, in the outer leaves, ± ovate-elliptic, very short-pointed, with 3–4 pairs of lateral veins; stem gracile but stiff, fragile, rising high above the leaf-mound, usually with a few small, blunt leaves; inflorescence relatively long and lax with flowers at regular intervals; bracts small and blunt, very concave, green, soon withering after flowering, in the bud bent inwards over each other; perianth 5(–5·7) cm. long, above the tube gradually widening into a funnel-like limb with strongly recurved, narrow and acute, white-margined, mauve—aconite violet segments with deep violet stripes and very dark tips; anthers light yellow with regular, golden pollen; fruit well developed, small, almost cylindrical; seeds *c.* 7–8 mm. long. Flowers rather late.

H. albomarginata is a Japanese species, which was introduced into Europe by SIEBOLD. It was already grown in England in the 1830's and seems to have been a popular plant there for at least twenty years. Later on it apparently became quite rare, and this must be the main reason why it was for so long time considered an insignificant form of the more commonly grown *H. lancifolia*. As a matter of fact, it differs from the latter most decidedly by its spreading growth, its mat, thin leaves, softer and before anthesis closely overlapping bracts and regular seed-setting. On the other hand, it comes very near *H. decorata*, which mainly differs by its broader leaves and capsules and more campanulate flowers. *H. albomarginata* is a good border plant for shady (even rather dry) places but should not be placed in open positions since the leaves cannot stand the wind and become yellowish in full sunshine.

To this species belongs a form with pure white flowers, var. *alba* (Irving) Hyl. It is quite a nice although rather slow-growing and weak plant and is remarkable botanically, since white-flowered forms seem to be extremely rare in *Hosta* outside the *Niobe* group. It is offered in Swedish, German and American nurseries as *H. minor alba* but has nothing to do with the true *H. minor*. On the whole, the plant is somewhat mysterious, since it cannot be traced further back than 1873, from

which year there is a dried specimen in the Kew Herbarium from MR. BARR's garden. It was described and illustrated by IRVING in 1903 but seems today to be very rare in England. It seems not to be a mere albino mutant of ordinary *albomarginata*, but to which race of that species it should be referred is still unknown. Remarkably enough it could not be identified with any form mentioned by MAEKAWA from Japanese gardens.

11. **Hosta decorata** L. H. Bailey.

Similar to *H. albomarginata* in size, leaf colour and anatomy, as well as in type of inflorescence and bracts; petiole with shallow, broad furrow, in the outer leaves broad-winged and gradually widening into the blade; leaf-blade broadly obtuse, with 4–5 pairs of lateral veins, in the typical plant with a narrow white border, in the outer leaves broadly ovate, in the others broadly oblong to elliptic-oblong; stem leafless or with one or a few broadly obtuse leaves; bracts dark olive green, shovel-like; perianth 4–5 cm. long, above the light tube widening rather abruptly into a rather campanulate limb with distinctly striate, slightly recurved acute segments, rather dark violet (about as in *albomarginata*); anthers light yellow, with good pollen; capsule well developed, relatively thick, ± clavate-cylindrical; seeds 7·5–9 mm. long, remarkably broad.

As mentioned above, this species seems to have been introduced about 1900 into the U.S.A. from Japan, where, according to MAEKAWA, it is grown in Honshu gardens. The "normal", green-leaved form, which occurs as a sport in the variegated garden form, seems to be rare in the wild state, since MAEKAWA mentions it only from one locality (in Honshu). Outside America, *H. decorata* seems to be rather seldom grown but is offered by nurseries also in Sweden as *Funkia* 'Thos. Hogg', under which name it seems to have made its entrance into the U.S.A. A magnificent picture is given of it in *Curtis's Botanical Magazine*, vol. 158, tab. 9395, 1935, with text by W. T. STEARN.

12. **Hosta ventricosa** Stearn (syn. *H. coerulea* (Andr.) Tratt.—non Jacq.; *Funkia ovata* Spreng.—nom. illeg.).

Large-leaved, tall but of a rather spreading mode of growth, not pruinose; petiole short but rather broad, with broad open furrow and narrow wings; leaf-blade ± horizontal, broadly (ovate-)cordate to suborbicular-cordate with short, narrow point, dark green on both sides, slightly glossy above, strongly glossy below, on either side of the midrib with 7–9 lateral veins united by unusually distinct transverse veins; stem leafless, thick and firm, up to 1 m. high, rising far above the leaves; raceme long and lax; bracts broad, obtuse, green with white base, very thin and withering already during anthesis; perianth dark violet, with still darker stripes, widening abruptly above the narrow tube into a campanulate limb with almost upright segments; anthers dark violet but with regular pollen; fruiting rich; capsule very long and thick, just before ripening almost white with green edges; seeds very large (11–14 × 6 mm.), broad-topped.

This well-known species is, in contradistinction to the foregoing ones, of Chinese origin and also stands quite apart from them morphologically by the type of its leaves and bracts and particularly by its dark campanulate flowers which make it the most decorative of all species in its subgenus. It may be grown with success also in rather sunny positions, although its thin leaves should then be sheltered against water-drops which may easily cause burnt spots. While usually correctly identified in gardens, its names (usually *coerulea* or *ovata*) have very often been misused for quite other forms, e.g. *H. undulata* var. *erromena*. Many forms are mentioned in garden literature and nursery catalogues as aberrants of *ventricosa*, but most of them, at least, belong to other species. However, there seems to be a variegated *ventricosa* form in cultivation in Holland.

13. **Hosta plantaginea** (Lam.) Asch.

A rather large-leaved, very late-flowering species without pruina; petiole narrow with deep furrow and distinct, thin wings; leaf-blade thin, very glossy and bright (± yellowish) green, ± (ovate-)cordate, short-pointed, with 7–9 veins on either side of the midrib; stem robust, reaching above the leaves, below the inflorescence usually with one to several ± well-developed leaves passing gradually into bracts; bracts large (the lowermost usually distinctly elongated), shovel-like, almost greenish white, when dry distinctly reticulate; flowers horizontal or ascending, scented; raceme short and dense even at anthesis; perianth pure white, of waxy firm texture, at least 10 cm. long; filaments almost straight, in their lower part (up to a quarter of their length) joined to the perianth tube; capsule up to 7·5 cm long; seeds (according to BAILEY) up to 14 mm. long.

This description refers to *H. plantaginea* s. str., i.e. the taxon known to LAMARCK from French gardens. In addition to this type, characterized by its broad, ovate perianth segments, a form occurs in European and American gardens which differs by its narrower and more elongate perianth lobes and—at least as a rule—also by its more long-pointed, more or less elongate-cordate leaf-blades. This is in my opinion identical with the form described and marvellously illustrated by LEMAIRE in 1846 as *Funkia grandiflora* Sieb. and should therefore be called *H. plantaginea* var. *grandiflora* (Sieb. ex Lem.) Asch. & Graebn. It had been imported from Japan, and it must be the same as the Japanese garden plant described much later by KIKUTI and MAEKAWA (1938) as *H. plantaginea* var. *japonica*—a somewhat confusing name since the plant, as mentioned by MAEKAWA himself, is certainly, like the main form, of Chinese origin, although introduced into Japan at an earlier date. It is also grown in Britain, together with the main form, which was introduced there in 1790.

FLOWERS IN PLASTER

Nigel Wykes

FOUR years ago the wooden roof of Eton College Chapel was found to be damaged beyond repair by the death-watch beetle, and has now been replaced by a stone fan-vault. SIR WILLIAM HOLFORD's design for the vault included, in the centre of each of the eight bays, a lozenge-shaped recessed panel, some 7 feet long by 4 feet wide, in which bosses have been placed, serving the dual purpose of providing a decorative feature and of concealing the ventilation holes. These bosses, 26 inches in diameter and 10 inches in depth, all representing flower-forms, are cast in fibrous plaster in high relief, and consist of two parts—a central almost hemispherical pendant, and an independent collar, separated by a 2-inch gap for the passage of air between them.

The first problem was to make designs suitable to the setting, and it seemed to me that, as the fan-vault is much simpler than most roofs of this kind, the bosses should be as naturalistic as is possible within the scope of conventional form, since stylized designs would appear dead and insignificant in such a living and dominating roof. Therefore I set to work to find flower-forms associated in some way with this particular chapel, and at the same time important enough to make a prominent feature of decoration. As the roof is 70 feet above the floor, it was essential that the elements should be fairly large, and should have some architectural properties. This latter consideration instantly eliminated all flowers more or less round in outline (like most camellias), or lacking in depth (like clematis), or too full in the centre (like the double paeony), quite apart from the fact that these flowers have no connection of any kind with Eton. Two obvious choices offered themselves, in that the Chapel is dedicated to the Madonna, and the Founder of Eton was Henry VI of Lancaster. Therefore it seemed essential to incorporate a lily and a rose in the scheme of decoration. The Madonna lily (*Lilium candidum*) immediately suggested itself, but there were difficulties here, since the natural habit of *L. candidum* is a series of flowers arranged in a vertical spike, and such a form is impossible to depict in a circular design. On the other hand *L. regale* normally grows with the flowers in an umbel radiating from a central point, and, seen from above, this could be accommodated, together with its buds, inside a circle. There was also some advantage in the more accentuated trumpet-shape of *L. regale*, since it would give greater depth to the flower. The ultimate version of the design (Fig. 106) shows three open flowers separated by two bursting buds and intersected by crossed stems, which bind the whole design together. With the rose there was also difficulty. The heraldic form of the red rose of Lancaster consists of a flat, single flower of five petals with a central boss of stamens, almost circular in shape. Such a stylized designed was unsuitable to this particular purpose, and therefore, a rose-form was chosen such as one finds in some of the

modern Floribundas, with two rows of petals, the outer projecting well beyond the inner, and the centre somewhat recessed, giving a concave shape to the flower. As with the lilies, there are three of these flowers, each intersected by a single bud, with the stems entwined at the centre to give coordination and movement (Fig. 107).

As there were eight bays to be decorated, it seemed desirable to make four different designs, each to be repeated once in progression, so that from any part of the chapel all four could be seen without difficulty. One other flower had an obvious claim to inclusion—the *Fleur-de-lys*. Perhaps fortunately, there are many possible explanations of the origin of this heraldic emblem, which appears on the Eton coat of arms. It has been variously identified as a lily, an iris, a spear-head, and a trio of (improbable) toads or (even more improbable) bees. Therefore there was considerable choice in the matter; but, while fishing on the Test, I was forcibly reminded of the beauty of our native yellow flag (*Iris pseudacorus*) and of the tenable theory that the "lys" perpetuated in the name is the river in Flanders, where this flower grows, as indeed it does all round Eton in the Thames water-meadows. Actually, the iris favoured in most identifications is almost certainly *I. florentina*, but, as heraldry has taken such liberties with botany in many cases, it seemed justifiable in this instance to reverse the process. Even so, the flower, with its drooping falls, was not readily adaptable to a boss design, and a further liberty was taken by translating it more into the form of what we call the Dutch iris. At any rate, what we see in the Eton chapel roof is five irises facing downwards, grouped round a central point, with leaves and buds again as the integrating element (Fig. 108).

The three designs so far discussed have all been composite, and it was clearly desirable to find something quite different for the fourth. The possibility of "Etonian" flowers appeared to have been exhausted, but our American friends came to the rescue. The Pilgrim Trust had contributed a large sum towards the repair of the Chapel, and it seemed right that their generosity should be commemorated in some visible form in the building. Therefore, holding firmly to the view that *Magnolia grandiflora* is the most beautiful of all flowers from North America (and perhaps from anywhere else), I used this in a single element since it combines beauty of outline with depth of construction, together with all the other qualities a flower should have. It would be difficult to improve on the texture of its petals, the refinement of its scent, or the perennial beauty of its foliage. Moreover, a single flower would make a boss in itself, with enough petals to provide depth and fullness, and not so many that it would tend to look like a cabbage at 70 feet. Accordingly the flower is shown with a central trio of petals closed, surrounded by three rows of outer petals at varying angles (Fig. 109). These four flowers, then, make up the pendant portions of the bosses, while in every case the collar shows their respective foliage, arranged in a formal pattern of different degrees of intricacy.

The process of translation into plaster was most interesting. The

four designs were first drawn in black and white inside a flat circle of 20 inches diameter, with the flowers shown foreshortened as they would be seen from a central point below. A second drawing was made of one segment of each, seen from an angle of 45 degrees, in order to give, as it were, a stereoscopic view of the individual flower. From these, Messrs. James Walker, of Acton, built up first of all a clay model in the degree of relief required, undercutting the petals as far as possible to give the maximum delicacy of treatment. Then a mould was made out of the pliable substance used for such purposes nowadays, into which the liquid plaster was subsequently poured and reinforced. The advantage of this kind of mould is that it enables quite elaborate and delicate objects to be extracted in one piece without damage, when the plaster has set hard. After erection in the roof the interior portions of the bosses were stained with sepia to enhance the natural shadow and to give prominence to the design and substance to the elements.

That, then, is the story of what is possibly a new use of floral design in ecclesiastical architecture. We are told that the fibrous plaster will last for five hundred years; perhaps some Etonian of A.D. 2460 will be writing in the R.H.S. JOURNAL to prove or disprove the contention.

A NEW VARIETY OF RHODODENDRON

H. H. Davidian, B.Sc.

Rhododendron glaucophyllum Rehder var. **luteiflorum** Davidian, var. nov. A typo floribus luteis recedit.

"NORTH BURMA. North Triangle. Uring Bum, above Akkail. 9,500 feet. *Rhododendron* sp. affin. *R. glaucophyllum*. A small more or less erect shrub or undershrub, growing in dense bushy thickets on the open granite ridge with several other species of *Rhododendron* and *Vaccinium*, *Gaultheria*, etc. Probably dwarfed in the open—here about 3 feet tall. Flowers over. This is probably its lower limit." F. Kingdon-Ward, No. 20845.

"NORTH BURMA. North Triangle, Tama Bum. 10,000–11,000 feet. June 20, 1953. *Rhododendron pruniflorum*? A bushy shrub, 3–5 feet tall. Leaves glaucous and scaly beneath. Style glabrous. Flowers not seen, three per truss. Bark flaky. Fruiting; not common in thickets along the ridge. (Same as No. 20845 ?)". F. Kingdon-Ward, No. 21040.

"NORTH BURMA. North Triangle. Uring Bum, above Akkail, 10,000 feet. November 4, 1953. *Rhododendron* sp. Series Glaucophyllum. A dwarf scrub plant growing socially on the exposed crest of the ridge. In more sheltered spots opening its buds. Flowers lemon yellow. (So this is neither *R. pruniflorum* nor *R. glaucophyllum*. The colour is much better than that of *R. hypolepidotum*.) Anthers red-brown, base of filament puberulous. Style glabrous. Same as No. 20845, and probably

No. 21040." F. Kingdon-Ward, No. 21556 (Holotype in Herb. Brit. Mus. Nat. Hist.).

The variety differs from the species in its yellow flowers. It is also separable by its geographical distribution; the species is known from Sikkim, Bhutan, South Tibet and Assam, and not from North Burma.

The plant is in cultivation under Kingdon-Ward No. 21040. It received the Award of Merit in April 1960 when exhibited by The National Trust for Scotland from their garden at Brodick Castle.

WISLEY TRIALS, 1960

VARIETIES OF RHUBARB

Eighty-three stocks of rhubarb were grown in the trials at Wisley in 1960. The trial was planted on October 10, 1957, by means of sets which were showing one good bud. The large varieties were planted 4 feet square and the smaller varieties 3 feet square. No sticks were pulled during 1958 and 1959.

The trial was inspected by a sub-committee of the Fruit and Vegetable Committee on April 22, 1960, and on its recommendation the Council has made the following awards to varieties of rhubarb.

The number in brackets after the description of the variety was that under which it was grown in the trial.

Early Mitchell. (Sent by Mr. E. A. Carter, 24 Old Church, near Fox Inn, Pontefract.) **A.M.** April 22, 1960. Stalks 19½ inches long, 1 1/16 inches across, 7/16 inch deep, flat on upper surface, strongly ribbed on reverse side, crimson in young stages, orange red fading to green at top in mature sticks, flesh green, 6 inches high on March 11. Leaves 17 inches wide, 16½ inches long, cordate, bright medium green. [55]

Vroege Engelse. (Sent by The Director, Institute of Horticultural Plant Breeding, Wageningen, Holland.) **A.M.** April 22, 1960. Stalks 21 inches long, 1½ inches across, 1 inch deep, channelled on upper surface, strongly ribbed on reverse side, red in young stages, carmine red in mature sticks, flesh light green, 6 inches high on March 25. Leaves 22 inches wide, 19 inches long, cordate, medium green. [59]

Rosenhagen. (Sent by The Director, Institute of Horticultural Plant Breeding, Wageningen, Holland.) **H.C.** April 22, 1960. Stalks 16½ inches long, 1⅜ inches across, ⅝ inch deep, flat on upper surface, very slightly ribbed on reverse side, scarlet to orange red in young stages, orange red in mature sticks, flesh light green, 6 inches high on April 1. Leaves 21 inches wide, 18 inches long, cordate, bright medium green. [64]

Zwolle Seedling; (Sent by The Director, Institute of Horticultural Plant Breeding, Wageningen, Holland.) **H.C.** April 22, 1960. Stalks 17 inches long, 1⅜ inches across, 9/16 inch deep, flat on upper surface, ribbed on reverse side, greenish pink in young stages, carmine in mature sticks, flesh light green, 6 inches high on March 17. Leaves 24 inches wide, 20 inches long, cordate, dullish medium green. [78]

PLANTS TO WHICH AWARDS HAVE BEEN MADE IN 1960

Oxalis siliquosa A.M. April 5, 1960, as a plant for the cool greenhouse. An attractive member of this genus from Costa Rica with a low, spreading habit suggesting its possible suitability as a basket plant. The decumbent, slightly hairy stems are red in colour and carry numerous purplish leaves, each consisting of three, broadly obovate, obcordate leaflets about ½ inch long. The upper surface of the leaves is greenish-purple and the under surface corresponds to Pansy Purple (H.C.C. 928/3), greatly adding to its decorativeness when out of flower. The Chinese Yellow (H.C.C. 606) five-petalled flowers, veined with red at the base of each petal, measure about ¾ inch across, and are borne on upright pedicels 2–3 inches long in the axils of the leaves. Exhibited by L. M. Mason, Esq., Talbot Manor, Fincham, King's Lynn, Norfolk.

Corylopsis glabrescens A.M. April 5, 1960, as a hardy, flowering shrub. A native of Japan, sometimes known as *C. gotoana*, this attractive shrub will grow to a height of 15 feet and bears numerous sweetly-scented flowers in pendent racemes about 2 inches long during April, before the leaves unfold. The individual five-petalled flowers are about ½ inch across and Dresden Yellow (H.C.C. 64/2 to 64/3) in colour. Exhibited by The Crown Estate Commissioners, The Great Park, Windsor, Berks.

Petrea volubilis F.C.C. April 5, 1960, as a flowering shrub for the cool greenhouse. This semi-scandent shrub, native to Tropical America and the West Indies, has opposite, elliptic, entire leaves up to 7½ inches long and 2¾ inches wide which are mucronate at the tips, subcordate at the base and somewhat undulate on the margins. The long pendent racemes of purple flowers which give it the common name of "Purple Wreath" were up to 18 inches long on the specimens shown. Each individual flower is up to 2 inches across and has a Lobelia Blue (H.C.C. 41/2) calyx with five spreading, linear sepals about ¾ inch long, joined at the base into a short pubescent tube. The five-lobed corolla is deeper in colour (near to Violet H.C.C. 36) with broadly obovate lobes ⅛ inch long. Exhibited by L. M. Mason, Esq., Talbot Manor, Fincham, King's Lynn, Norfolk.

Magnolia × soulangiana 'Rubra' A.M. April 20, 1960, as a hardy flowering shrub. A large flowered variety of the well-known early flowering hybrid between *M. denudata* and *M. liliflora*, with slightly-scented flowers which are pear-shaped when young, expanding with age to goblet-shaped flowers about 5 inches across. Each flower is composed of six obovate-elliptic petals about 4 inches long and 2½ inches across partially enclosed by three smaller petaloid sepals and coloured Magnolia Purple (H.C.C. 030/1–2) outside and a milky-white inside. Exhibited by G. L. Pilkington, Esq., Grayswood Hill, Haslemere, Surrey.

Magnolia × soulangiana 'Norbertii' A.M. April 20, 1960, as a hardy flowering shrub. An excellent, free-flowering variety of this hybrid with slightly scented, goblet-shaped flowers about 4 inches across when open. The individual, narrow-petalled flowers are each composed of nine obovate perianth segments about 3 inches long and 1½ inches wide, white in colour with a slight purple flush on the outside, and arranged in three whorls, each of three segments. Exhibited by G. L. Pilkington, Esq., Grayswood Hill, Haslemere, Surrey.

FELLOWS WISHING TO OBTAIN PLANTS RARE IN CULTIVATION

Nerine bowdeni alba	John Hale, Esq., Heron House, Aldeburgh, Suffolk.
Puja chilensis	Mrs. Eric Mackenzie, Calgary House, Tobermory, Isle of Mull.
Primula scapigera *Primula forrestii* *Primula rockii* *Primula reinii* *Primula kingii* *Androsace helvetica* *Iris histrio aintabensis* *Jankaea heldreichii*	Dr. R. B. Cain, 10B, Springwood Road, Roundhay, Leeds 8, Yorks.
Genuine Malmaison Carnations: 'Princess of Wales', 'Souvenir de la Malmaison', etc.	V. Hudson, Big Coombe Farm, Hastingleigh, Ashford, Kent.
Primrose 'Garryarde Enid'	G. W. Heney, 28 Haileybury Avenue, Enfield, Middlesex
Orchis simia	Sir Ralph Newman, Bt., Blackpool House, Nr. Dartmouth, S. Devon.
Hibbertia dentata	

BOOK NOTES

"British Ferns and Mosses." By P. G. Taylor. 231 pp. Illus. Kew Series. (Eyre and Spottiswoode, 1960.) 25s.

The fourth volume of "The Kew Series" to appear maintains the high standard of production of others in this series. As in the previous volumes there is an Introduction (pp. 9–12) which acquaints the reader with the botanical terms used and with the life histories of the fern and moss plant; the Glossary (pp. 220–6) is less lucid however. Although this book aims at embracing two large groups, the greater part (pp. 23–176) is devoted to ferns and the majority of our species are fully described, together with data on habitat preferences useful to all who grow ferns. There is a single key to all species mentioned, and this is excellent in parts (e.g. for *Equisetum*), but a key to the genera would, perhaps, have put the classification into perspective. Mr. Taylor's taxonomy

is for the beginner rather than the serious student and many of our interesting problems have been glossed over.

The publishers' unfortunate decision to include mosses presented the author with the unenviable task of choosing one-twelfth of our British species. He has described them well but it might have been more useful to have chosen species closely associated with common fern habitats and at the same time to have included some of the more conspicuous liverworts. This section as presented, without keys and in systematic order, can be of little help to the beginner.

The ferns are beautifully illustrated both in line and colour by Miss Ann Webster; her habit sketches of the mosses, however, are not so convincing and the absence of a measuring scale in all her drawings is unforgivable.

A. C. JERMY

"Gardening, Forcing, Conditioning and Drying for Flower Arrangements." By Arno and Irene Nehrling. 228 pp. Illus. (Hearthside Press Inc.) $3.95.

The opening theme of this book is how to design and plant a garden, which will be pleasing in itself and at the same time provide flowers and foliage for arrangements. But its special interest lies in that part devoted to the preparation of material for flower-decoration, because so far as I know nothing of the kind has even been written before.

This part falls into three sections. Instructions for "conditioning" are given; that is to say, for the treatment of material beforehand, so that it will afford the best effect and last longest. Information is supplied as to "forcing", mainly of branches of flowering-shrubs and of leaves to bring them into early flower and green; the time that this may be expected to take in respect of each subject is indicated. Finally comes the most interesting section of all, on the preserving of plant material for arrangements. Lists of plants, which can be preserved or dried well, are given, and the processes, which sound very simple, namely steeping in glycerine and water, drying in borax and "corn-meal" or merely hanging up head-downwards, are described. What it appears possible to dry is quite astonishing, even daffodils. It is to be regretted that the authors did not include *Eryngium giganteum*, a "grand candelabrum of frosted-silver" as Canon Ellacombe called it, surely pre-eminent among all plants for drying and oddly omitted here when the inferior *Eryngium maritimum* is included. Nevertheless, all this is quite unique and will make the book of great interest to flower arrangers.

MORTON

"Campanulas and Bellflowers in Cultivation." By H. Clifford Crook. Cr. 8vo. 90 pp. Illus. (Blandford.) 10*s*. 6*d*.

Mr. Crook's larger book on campanulas will be well known to all those interested in the genus. This little book only deals with a selected range of campanulas which are in general cultivation, but in addition includes notes on other genera in the *Campanulaceae* such as *Adenophora*, *Codonopsis*, *Cyananthus* and *Phyteuma*. There is a useful key for the differentiation of these genera and it is made as simple as possible, giving only one essential character of each genus. The photographs will help beginners in these genera, but unfortunately they are rather weakly printed in the copy available here.

"The Propagation of Alpines." By Lawrence D. Hills. 2nd Edition (revised.) 8vo. 484 pp. Illus. (Faber & Faber.) 50*s*.

It is eight years since the First Edition of this book appeared and so a new and revised edition will be welcomed by rock gardeners and alpine plant enthusiasts even though the twenty pages added to the length together with the rise in costs of all printing has doubled the price in the interval. A new chapter has been added on Soil Warming, Irrigation and Mist Propagation, but the former Index of Good Alpines and also the attractive colour frontispiece of *Lithospermum* have been left out. There is also additional material on plant hormones, on soil block cultivation and on the use of polythene and a number of new plants have been added to the dictionaries of propagation by various methods and this now includes a number of quite rare plants on which information is scarce and so welcome here.

"Plant Pathology: Problems & Progress, 1908-1958." 588 pp. Illus. (University of Wisconsin Press, Madison, Wisconsin.) $8.50

This publication was sponsored by the American Phytopathological Society which, on the occasion of its Golden Jubilee, appointed a Fiftieth Anniversary Committee to consider ways of celebrating the important occasion. It was decided that the activities should take the form of an international meeting at which scientists from all over the world would be asked to contribute addresses dealing with all the various branches of plant pathology.

The meeting was held at Bloomington, Indiana, in August 1958, when papers were presented by some of the most distinguished scientists engaged in the study of various aspects of plant disease. As may be imagined the result is a reliable and impressive record of our present knowledge in this most important subject.

This book is, in effect, a report on the proceedings of the above meeting. From its contents we can get a picture of the development of plant pathology as a science over the last half-century as well as an idea of its probable progress, at least in the near future. It contains much that will interest workers in near-related subjects such as genetics and it should certainly be read by anyone beginning the study of plant disease. It is doubtful, however, whether the average agricultural or horticultural grower will find much to interest him in these pages.

The book is divided into ten parts, the first section covering the past history and suggesting the future development of plant pathology while each of the nine remaining sections covers a major branch of the subject. Having regard to the prestige of the various authors the quality of the subject matter is outstanding. Moreover, the book is handsomely bound in a gold cover with excellent presentation and print of high quality with an exceedingly good index.

In this short review we must find space to offer congratulations both to the publishers for producing such a book at the price and also to the Council of the Society which not only initiated the meeting, but provided the means whereby its deliberations could be placed on record for the benefit of plant pathologists all over the world.

D. E. GREEN

"Garden Shrubs and Trees." By S. G. Harrison. 318 pp. Illus. (Eyre & Spottiswoode Ltd.) 25s.

The purpose of this handy little volume is to provide a systematic guide to the trees and shrubs most generally to be met with in British gardens. If this cannot be said altogether to have been achieved, it is due rather to the nature of the work than to any fault in its execution. Newcomers to botany, whom it is intended to help, are too often unable to take advantage of such a book on their own.

Consider, first, the "key", certainly here clearly and simply set out. A "key" is of but very limited assistance to those without some botanical knowledge, or someone to show how to use it. A very good introduction gives much useful information as to morphological characters. Admirable line drawings illustrate the different types of leaves. Many of the terms in these features are highly technical and not readily understood by those unfamiliar with botanical usage. The trouble is that botany is a difficult science not easily popularized and its principles are only to be apprehended by hard sustained study. Amateurs, who want to learn something about plants, and have not grown up with them or grown and observed them for years, have to scramble themselves into some sort of knowledge through a combination of systematic study and a more empirical approach. Viewed in this light it may be said that this little book will help them.

The genera concerned seem adequately covered, though some appear to have received disproportionate treatment. Thirteen cotoneasters are described, but only five rhododendrons, and these rather a curious selection, *R. arboreum*, *ponticum*, *ferrugineum*, *dauricum* and × *praecox*. The coloured illustrations by Miss Ann V. Webster are excellent.

MORTON

"The Rose in Britain." By N. P. Harvey. New and Revised Edition. 8vo. 212 pp. Illus. (Souvenir Press.) 25s.

Rose growers will undoubtedly welcome this new edition of Mr. Harvey's attractive and useful book. Much new material appears in it interspersed throughout the text. The glossary of selected and recommended roses has been much expanded to

include newer varieties while some old ones have been left out. The rather impressive colour plates remain the same and are unusually good examples of colour printing.

"The Promotion of a vegetative cover on mine slimes, dams and sand dumps." By D. Chenik. (*Journal of the South African Institute of Mining and Metallurgy*.) Obtainable from the London Secretary, Luipaards Vlei Estate and Gold Mining Co. Ltd., 49 Moorgate, London, E.C.2.

This paper was originally read before the Association of Mine Managers of South Africa and describes in considerable detail experiments which have been made to start the growth of vegetation on barren mine dumps. These are often very acid and infertile and present considerable problems. This paper should help not only those in South Africa but also in other countries faced with similar problems and it is most desirable that every effort should be made to cover such dumps. Those from the China Clay Mines in Cornwall are a rather parallel example in our own country. In this case it was found that Kentucky Blue Grass was one of the best colonizing agents, but experiments were tried with a number of grasses, bamboos, leguminous plants and shrubs.

"Decorative Trees and Shrubs." By Hans Schwarzenbach, with text by Hans Zaugg and Hans Coaz, translated and adapted by Herbert L. Edlin. (Thames and Hudson.) £5 5s.

This is a large and expensive volume but unfortunately the colour plates would appear to have been drawn and coloured more as decorative designs such as might have been used for a textile or a wallpaper than for a realistic or botanical rendering of the plant. In this latter category they have been singularly unsuccessful, having lost in most cases the whole appearance of the shrub and so will unfortunately be of little use to gardeners. The small black and white drawings at the foot of each plate are quite different and are accurate representations of the parts shown. The text contains some useful details but is not very extensive. It is regrettable though that *Rhododendron luteum*, a species showing little colour variation, should have been confused with the numerous brightly coloured hybrids, both in text and illustration.

"Supplement to the Pocket Guide to Wild Flowers." By David McClintock. 89 pp. (Miss Robb, Catton Hall, Thirsk, Yorkshire.) 6s.

The *Pocket Guide to Flowers* was undoubtedly one of the most successful and thorough attempts made in recent years to put down our Flora inside a single manageable volume. Here about 450 further species are described, many of them coming into the category of garden escapes which have become naturalized in some areas. Owners of the *Pocket Guide* will undoubtedly need this *Supplement*. Not the least valuable part of it nor possibly the least controversial are the English names for each species described In addition there is a long list of hybrids not recorded in the main work, a valuable list of albinos, a useful bibliography and a list of county floras and check lists.

PATRICK M. SYNGE

"Indoor Plants." Amateur Gardening Picture Book No. 8. By A. J. Huxley. Illus. 60 pp. (Collingridge.) 7s. 6d.

This little book can be strongly recommended to all those who like to grow plants in their houses or who cannot garden outside. The form and beauty and variety of foliage of many of the plants illustrated will surely please any connoisseur of plants and to this is added practical chapters, obviously based on personal experience which should be a great help to any indoor gardener. The pleasure that can be derived from such plants is considerable if they are well grown, but they do require some care and attention, probably more than they would if grown outside and their varying requirements need to be studied. This book provides the necessary information in a brief but clear manner and much of this is given through the excellent photographs and diagrams.

PATRICK M. SYNGE

"Dean Forest and Wye Valley." National Forest Park Guide. 96 pp. Illus. 2nd. Edition. (H.M.S.O.) 5*s*.

This attractive guide is edited by Mr. Edlin and has a foreword by the Earl of Radnor, Chairman of the Forestry Commission. It is made up of contributions by various authors on particular branches of the forestry and natural history of the area. The Forest of Dean is one of the few surviviors of the ancient Royal Forests and has been under the care of the Forestry Commission since 1924. It is also one of the most beautiful forest areas in England and one able to grow hardwoods satisfactorily, particularly oaks.

Any visitor to this area would certainly be well advised to buy a copy of this little guide, which is beautifully produced in the same style as other booklets in the series. Some of the photographs are unusually fine.

PATRICK M. SYNGE

"Garden Making." By G. B. Walkden. Amateur Gardening Picture Book No. 6. (Collingridge.) 12*s*. 6*d*.

This little book contains pictures and short descriptions of the construction of a number of garden features such as the owner of a small garden might make for himself. These include paths, walls, pools, lawns, and even bridges, pergolas and the erection of sectional greenhouses. A plate of a collection of garden ornaments of the concrete rabbit, gnome and owl type may well, however, cause many gardeners to shudder but most of the illustrations and the text are of a more practical nature.

PATRICK M. SYNGE

The following books have been received:

"Cockle Park Farm." By H. Cecil Pawson. 261 pp. Illus. (Oxford University Press.) 35*s*.

"Window-Box Gardening." By P. R. S. Hunt. 91 pp. Illus. (W. H. & L. Collingridge Ltd.) 4*s*.

"Plant Propagation." By H. G. Witham Fogg. 102 pp. Illus. W. & G. Foyle Ltd. 4*s*.

"Nederlandse Dendrologische Vereniging." 272 pp. Illus. (H. Veenman & Zonen N.V.) Ing.F. 15.

"Soil Sterilization." Bulletin No. 22 Ministry of Agriculture, Fisheries and Food. 49 pp. Illus. (H.M.S.O.) 4*s*.

"Soils and Manures for Vegetables." Bulletin No. 71 Ministry of Agriculture, Fisheries and Food. 78 pp. (H.M.S.O.) 5*s*.

"A Manual of Aquarium Plants." By Shirley Aquatics Ltd. 64 pp. Illus. (Eclipse Office Supplies.)

"Fortieth Annual Report of the Forestry Commissioners for the Year ended September 30, 1959." 78 pp. Illus. (H.M.S.O.) 5*s*. 6*d*.

"Handbook on Soils." (Brooklyn Botanic Garden.) 79 pp. Illus. $1.00.

"Simple Flower Arrangement." By Violet Stevenson. 80 pp. Illus. (W. H. & L. Collingridge Ltd.) 12*s*. 6*d*.

"Flowers for You." By Dodds Bebb. 96 pp. Illus. (W. H. & L. Collingridge Ltd.) 21*s*.

"Miniature Roses." By Roy Genders. 104 pp. Illus. (Blandford Press). 12*s*. 6*d*.

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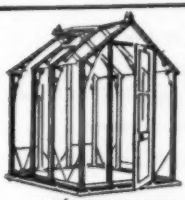

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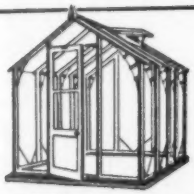

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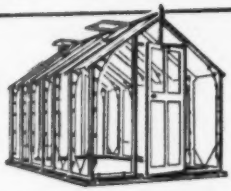

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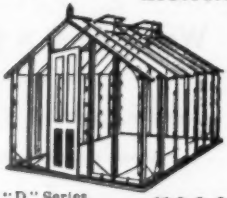

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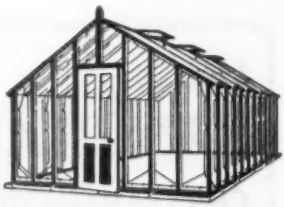

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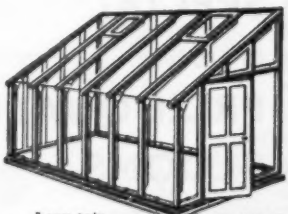

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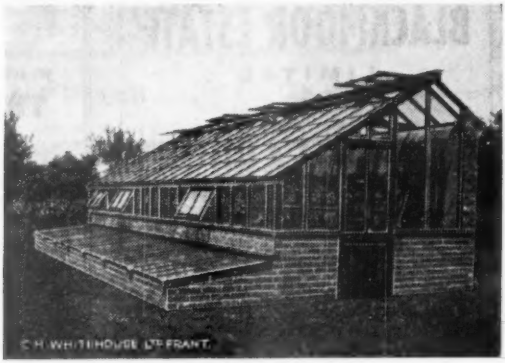

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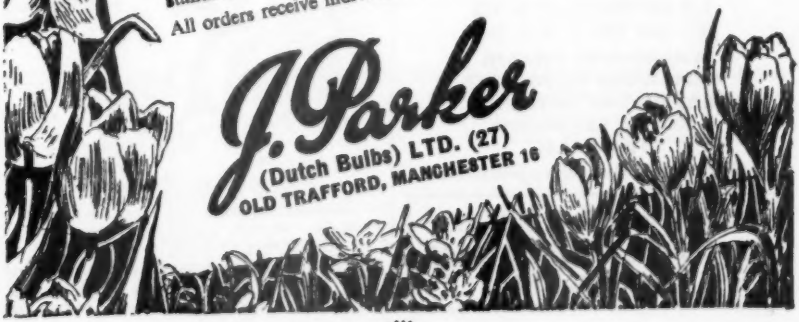

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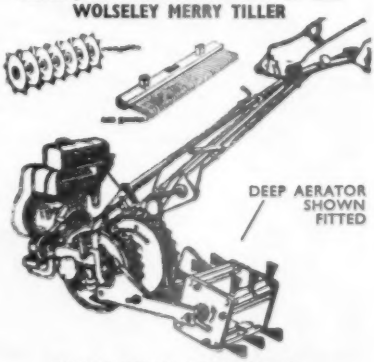

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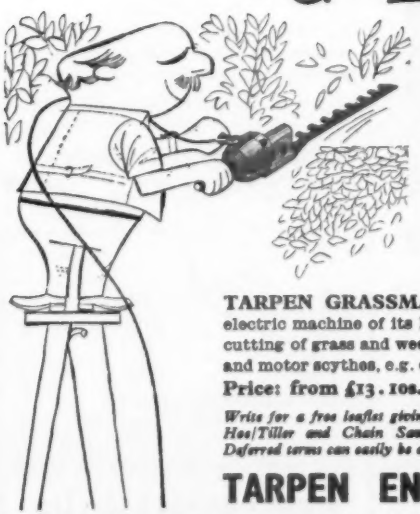

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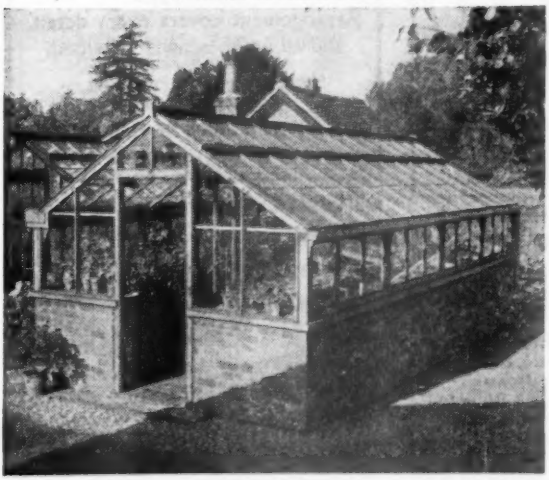

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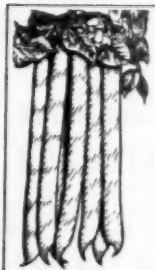

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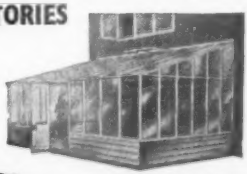

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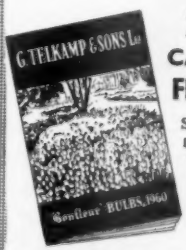

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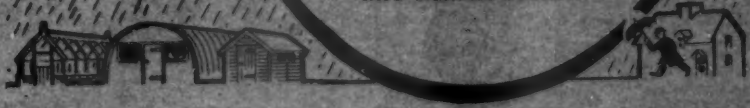
Weatherproofing . . . waterproofing . . . indoors or outdoors — Sylglas is the answer. Sealing, lagging, caulking — for use on windows, roofs, drainpipes, gutters, maintaining greenhouses, sheds, caravans etc. Sylglas for any sealing purpose — the 100% waterproof product of 30 years' experience.

30 ft. rolls 1″ wide — 2/9d.
1½″ wide—4/1½d.

Other widths up to 4″ wide in ½″ steps, pro rata.
Sylglas also available in Cord and Mastic forms.

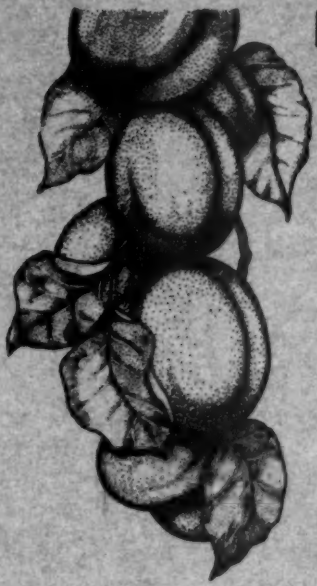


Get Sylglas from Seedsmen, Hardware & Builders' Merchants, and Departmental Stores. If you have any waterproofing problems we shall be glad to help and give you advice.

THE SYLGLAS COMPANY

81 Knight's Hill, West Norwood, London, S.E.27.

Tel.: GIPsy Hill 7511 (10 lines) *Telegrams: Snowwhite, London, S.E.27.*



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No fruit bottles better than plums and greengages, and now is the time to bottle them fresh from the tree straight into the jars.

And there's no simpler, easier way than with ordinary jam jars and Snap Closures, the safe, certain method requiring no skill and costing but a few coppers per jar.

Bottle with

SNAP PATENT VACUUM CLOSURES

Obtainable from all hardware stores

or from

SO SIMPLE —SO CERTAIN

PLANTOIDS LTD. BROMLEY, KENT

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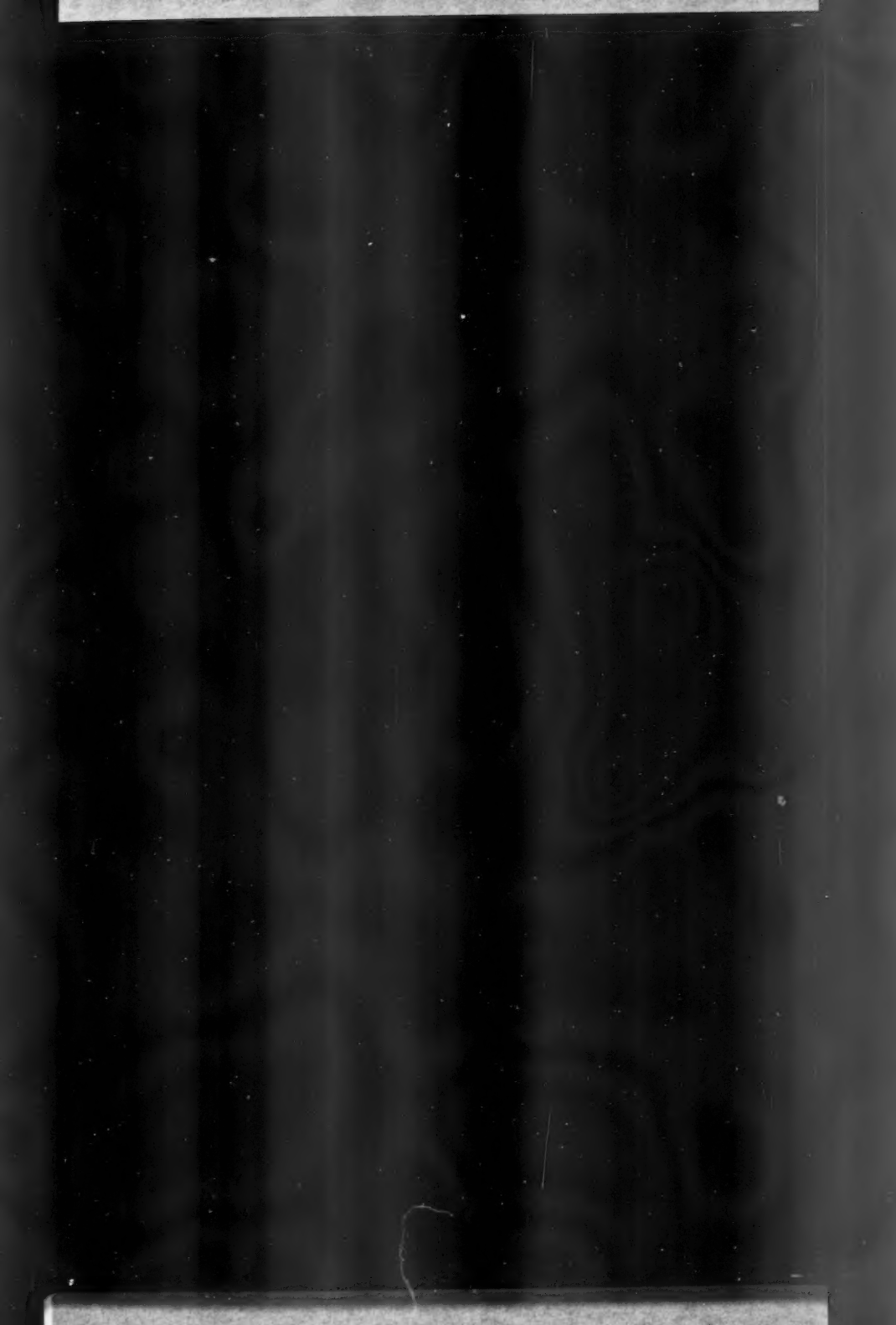
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